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Express Mail No. EV719392064US

**"REPLACEMENT SHEETS"****11729.1 contg**

TAGAGAGGCACAGAACAGAACAGAGTAAAGCAGCAAAGCCGGTTTTGTTTGTTTGTTT  
 GTTTGAGATGGAGTCTCACTCTGTTGCCAAGCTGGAGTACAACGGCATGATCTCAGCTCGCTGCAACCT  
 CCGCCTCCCACGTTCAAGTGATTCTCCTGCCTCAGCCTCCAAGTAGCTGGGATTACAGGCAGGCCAC  
 CACGCTCAGCTAATTTTTGTATTTAGAGACAGGGTTACCAGGGTGGCCAGGCTGCTCTGAA  
 CTCCGTACCTCAGGTGATCCACCCGCCTGGCCTCCAAAGTGCTGGGATTACAGGCAGTGGCCAC  
 CCCGGCCCCAAAGCTGTTCTTTGTCTTAGCGTAAAGCTCCTGCCATGCAGTATCTACATAACTGAC  
 GTGACTGCCAGCAAGCTCAGTCACTCCGTGGTC

**11729-45.21.21.cons1**

TAGGATGTGTTGGACCCTCTGTGCAAAAAAAACCTCACAAAGAACATCCCCTGCTCATTACAGAACAGATGC  
 ATTTAAAATATGGGTTATTTCAACTTTATCTGAGGACAAGTATCCATTAAATTATTGTGTCAGAACAGATTG  
 AATACCTGCTTAAGAACAGCTACAGAACAGCTATGGGAGGAGGTTGGCAGCAAGAACAAATTGAACATTAAAAA  
 TCAACTTGATGACAGTAAAATGGCCTTCTGCATGGAACTTATTGAGCTTATTGAAATGGACAGTTA  
 GCAAAGGCATGGACCGGCAGACTGTGTCTATGGCAATTAAATGAAGTCTTAATGAACATTATTAGATGTG  
 TAAAGCAGGGTTACATGATGAAAAAGGGCCACAGACGGAAAAGTGGACTGAAAGATGGTTGACTAAAAA  
 CCCAACATAATTCTTACTATGTGAGTGAGGATCTGAAGGATAAGAAAGGAGACATTCTCTGGATGAAAAT  
 TGCTGTGAGTCCTGCCATGACAAAGATGGAAA

**11729-45.21.21.cons2**

TTAGAGAGGCACAGAACAGAACAGAGTAAAGCAGCAAAGCCGGTTTTGTTTGTTTGTTT  
 GTTTGAGATGGAGTCTCACTCTGTTGCCAAGCTGGAGTACAACGGCATGATCTCAGCTCGCTGCAACCT  
 CCGCCTCCCACGTTCAAGTGATTCTCCTGCCTCAGCCTCCAAGTAGCTGGGATTACAGGCAGGCCAC  
 CACGCTCAGCTAATTTTTGTATTTAGAGACAGGGTTACCAGGGTGGCCAGGCTGCTCTGAA  
 CTCCGTACCTCAGGTGATCCACCCGCCTGGCCTCCAAAGTGCTGGGATTACAGGCAGTGGCCAC  
 CCCGGCCCCAAAGCTGTTCTTTGTCTTAGCGTAAAGCTCCTGCCATGCAGTATCTACATAACTGAC  
 GTGACTGCCAGCAAGCTCAGTCACTCCGTGGTC

**11731.1contig**

TCTTTTCTTCGATTCCTCAATTGTACGTTGATTTATGAAGTTGTTCAAGGGCTAAGTGTGTAT  
 TATAGCTTCTCTGAGTCCTCAGCTGATTGTTAAATGAATCCATTCTGAGAGCTAGATGCAGTTCTTT  
 TCAAGAGCATCTAATTGTTCTTAAGTCTTGGCATAATTCTCCTTCTGATGACTTTATGAAGTAAACT  
 GATCCCTGAATCAGGTGTGTTACTGAGCTGCATGTTTAATTCTTGTAAAGCTGCTTCAGGGACC  
 AGATAGATAAGCTTATTTGATATTCTTAAGCTTGTGAAGTTGTTGATTCCATAATTCCAGGTACA  
 CTGTTATCCAAAACCTCTAGCTCAGTCTTGTGTTGCTTCTGATTGGACATCTGTAGTCTGCCAG  
 ATCTGCTGATGXTTCCATTCACTGCTCCAGTCCAGGTGGAGACTTXCTTCTGGAGCTCAGCCTGACA  
 ATGCCCTCTGXTCCCT

*Fig. 1A*

**11731.2contig**

AGCCAGATGGCTGAGAGCTGCAAGAAGAAGTCAGGATCATGATGGCTCAGTTCCCACAGCGATGAATGG  
AGGGCCAAATATGTGGCTATTACATCTGAAGAACGTACTAAGCATGATAAACAGTTGATAACCTCAAACC  
TTCAGGAGGTTACATAACAGGTGATCAAGCCGTACTTTCTACAGTCAGGTCTGCCGGCCCCGGTTT  
AGCTGAAATATGGGCCTATCAGATCTGAACAAGGATGGGAAGATGGACCAAGAGTTCTATAGCTA  
TGAAACTCATCAAGTTAAAGTTGCAGGGCCAACAGCTGCCTGTAGTCCTCCCTCATGAAACAAACCC  
CTATGTTCTCTCCACTAATCTCTGCTCGTTGGATGGGAAGCATGCCAATCTGTCCATTATCAGCCAT  
TGCCTCAGTTGCACCTATAGCAACACCCCTGTCTGCTACTTCAGGGACCAAGTATTCTCCCCTAATGA  
TGCCTGCTCCCTAGTGCCTCTGTTAGTA

**11734.1contig**

AATAGATTAATGCAGAGTGTCAACTCAATTGATTGATAGTGGCTGCCTAGAGTGCTGTGAGTAGGTT  
TCTGAGGATGCACCCCTGGCTTGAAGAGAAAGACTGGCAGGATTAACAATATCTAAAATCTCACTGTAGGA  
GAAACCACAGGCACCAGAGCTGCCACTGGTGCTGGCACCAAGGCCAGCGAAGAGGCCAAAT  
GTGAGAGTGGCGGTCAAGGCTGGCACCAAGCACTGAAGCCACCACTGGTGCTGGCACTGGCACTGGCACTG  
TTATTGGTACTGGTACTGGCACCAAGTGTGGCACTGCCACTCTTGGCTTGGCTTAGCTCTGCTCC  
CGCCTGGATCCGGGCTTGGCCCAGGGTCCGATATCAGCTCGTCCCAGTTGCAGGGCCCGCAGCATT  
TCCGAGCCGAGCCAATGCCATTGAGCTTAATCTGGCCCTAGCCTGGCTTCAGCTGCAGCCTCAG  
CTGCAGCCTCAAATCCGCTTCCATGCCCTCTCGTAC

**11734.2contig**

GCCAAGAAAGCCCCAAAGGTGAAGCATCTGGATGGGAGAGGATGGCAGCAGTGATCAGAGTCAGGCTT  
CTGGAACCACAGGTGGCGAAGGGTCTCAAAGGCCATAATGGCCTCAATGGCCCGCAGGGCTCAAGGG  
GTCCCCTAGCCTTGGGCCGCAGGGCATCAAGGACTCGGTTGGCTGCTTGGGCCGGAGAGCCTTGCT  
CTCCCTGAGATCACCTAAAGCCCGTAGGGCAAGGCTGCCGTAGAGCTCCAAGCTCCAGTCATCCCAA  
GAGCCTGAAGCACCACCTGGATGTGGCCCTTGCAAGGGAGGGCAAATGATTGGTGAAGTACC  
TTTGGCTAAAGACCAAGACGAAGATTCCATCAAGCGCTGGACATGCTGAAGGACATCATCAAAGAATAC  
ACTGATGTGTACCCCGAAATCATTGAACGAGCAGGCTATTCTGGAGAAGGTATTGGATTCAATTGAAG  
GAAATTGATAAGAATGACCACTTGTACATTCTCTCAGC

**11736.1contg**

GAGGTCTCACTATGTTGCCAGGCTGTTCTGAACCTCTGGATCAAGCAATCCACCCATGTTGGTCTCCA  
AAAGTGTGGATCATAGGCCTGAGCCACCTCACCCAGCCACCAATTTCATCAGGAAGACTTTCTTC  
TTCAAGAAGTGAAGGGTTCCAGAGTATAGCTACACTATTGCTGCCTGAGGGTGACTACAAAATTGCTTGC  
TAAAAGGTTAGGATGGTAAAGAATTAGATTTCATATTGCTGATTATCACAGAAATAATGTATGAAATGCTTGGATT  
AATACATATTCTAAAATAATTATTCACTATTCCATATTGCTGATTATCACAGAAATAATGTATGAAATGCTTGGATT  
TCTTGGAGTAAACTCCATTACTCATCCCAAGAAACCATTATAAGTATCACTGATAATAAGAACACAGGAC  
CTTGTCTAAATTCTGGATAAGAGAAATAGTCTGGGTGTTGXTCTTAATTGATAAAATTACTGTCCATC  
TTTAGTTAGCATCACAAAA

*Fig. 1B*

**11736.2contig**

AAGCGGAAATGAGAAAGGAGGGAAAATCATGTGGTATTGAGCGGAAAAGTGCCTGGATGACAGGGCTCAGT  
CCTGTTGGAGAACTCTGGGTGGTGTAGAACAGGGCCACTCACAGTGGGTGCACAGACCAGCACGG  
CTCTGTGACCTGTTGTTACAGGTCCATGATGAGGTAAACAATACTGAGTATAAGGGTTGGTTAGAAC  
TCTTACAGCAATTGACAAAGTAATCTTCTGTGCAGTGAATCTAAGAAAAAAATTGGGGCTGTATTGTATGT  
TCCTTTTTTCATTCATGTTCTGAGTTACCTATTTTATTGCATTTACAAAAGCATCCTCCATGAAGGACC  
GGAAGTAAAAACAAAGCAGGTCTTATCACAGCACTGTCGTAGAACACAGTCAGAGTTATCCACCCAAG  
GAGCCAGGGAGCTGGGCTAAACCAAAGAATTGCTTTGGTTAATCATCAGGTACTTGAGTTGGAATTGTT  
TTAATCCCATCATTACCAAGGCTGGAXGTG

**11739-1&2**

CCGCGGCTCCTGCCAGACCCCTGACCCCTCCCTCCCAAGGCTCAACCGTCCCCAACAAACGCCAGCCTTG  
TACTGATGTCGGCTGCGAGAGCCTGTGCTTAAGTAAGAACATCAGGCCTTATTGGAGACATTCAAGCAAAGGT  
TGGACAACACTTTCCAGAACAGAAAGGAAACTCATGCATCAGAAAAGGTGACTAATAAGGTACCAAG  
AATATGGCTGCACAAATACCAAGAACATCTGATCAGATAAAACAGTTAAGGAATTCTGGGGACCTACAATAAA  
CTTACAGAGACCTGCTTTGGACTGTGTTAGAGACTTCACAACAAAGAGAAGTAAACCTGAAGAGACCACC  
TGTTCAAGAACATTGCTTACAGAAATATTAAAAATGACACAAAGAACATCCATGAGATTTCAGGAATATCATA  
TTCAGCAGAACATGAAAGCCCTGGCAGCCAAGCAGGACTCCTGGCCAACCACGATAGAGAACGCTGATGG  
ATGAACTTTGATGAAAGATTGCCAACAGCTGCTTATTGGAAATGAGGACTCATCTGATAGAACATCCCCTGA  
AAGCAGTAGCCACCATGTTCAACCCTGTCACTGACTGTTGGCAAATGGAAACCGCTGGAGAACAAAATT  
GCTATTACCAAGAACATCACAAAGAGCTTATTGTTCAAGTAAAGATGCAACATTGTTGAG  
GCCTTATGATTCAAGCAGCTGGTCACTGATTAGAAAAAAACCAATTGTTCTCAATTGTGACTGTTAATT  
TAAAGCAACTATGTGTTGATCATGTATGAGATAGAAAAATTAACTCAAAGTAAAGAACATGGA

**11740.1.contig**

GAAAAAAATATAAACACACTTTGCGAAAACGGTGGCCCTAAAAGAGGAAAAGAACATTCAACATATAAT  
CCAATTGAAACTGACAATTAAATCCAAGAACATCACTTTGTAATGAAGCTAGCAAGTGTGATGATGATGAT  
AAAATAAACGTGGAGGAATAAAACACAAGACTTGGCATAAGATATATCCACTTTGATATTAAACTTGTGA  
AGCATATTCTCGACAAATTGTGAAAGCGTTCTGATCTGCTTCTCCATTCAAATAAGGAGGCATATC  
ACATCCCAGAGTAACAGAAAAAGACATTTCGATTTGAGATGAACCAAAGACACAAAACAAA  
ACGAACAAAGTGTCAATTCTAGCCTCTGAAATAACCTGAACATCTCCTACAAGGCACCGTGATT  
TTTGTAAATTCTAACCTGAAGAAATGTGATGACTTTGTTGGACATGAAAATCAGATGAGAAAAGTGTGGCTTT  
CCAAAGCCTGAACCTCCCTGAAAACCTTGCA

*Fig. 1C*

**11766.1.contig**

CTGGGATCATTCTCTTGTACATAAAAGACTCTTCTTCCTCATCCTCTTCATCCTCTTGTA  
CAGTGTGCCGGTACAACGGCTATCTTGTCTTATCCTGAGATGAAGATGATGCTCTGTTCTCCTACC  
ATAACTGAAGAAATTCGCTGGAAGTCGTTGACTGGCTGTTCTGACTTCACCTCTTGCAAAACCTGA  
GTCTTTTACCTCATGCCCTCAGCTCCACAGCATCTTCATCTGGATGTTATTTCAAAGGGCTACTGA  
GGAAACTCTGATTCAAGGGTCAAGAGTCACTGTGATTTCTCCTCATTTGCTGCAAATTGCCTTTG  
CTGTCTGTGCTCTCAGGCAACCCATTGTTGTATGGGGCTGACAAAGAACCTTGGTCGATTAAGTGG  
CCTGGGTGTCAGGCCCCATTATATTAGACCTCTCAGTATAGCTTGGTAATTCCAGGAAACATAACACC  
ATTCAATTGATTAACATTGGAATTGGTTT

**11766.2.contig**

GAGGGTTGGTGGTAGCGGCTGGGGAGGTGCTCGCTCTGCGCTTGCTCTCGCACGCTCCCCGG  
CTCCCTCGTTCCCCCCCCGGTCGCCTCGCGTGCAGGAGTGTGCGAGGGAGGGAGGGCGTCGG  
GGGGGTGGGGGGAGGCCTCCGGTCCCCAAGAGACCCCGGGAGGGAGGCCTGTGAGGGACTCC  
GGGAAGCCATGGACGTCGAGAGGCTCCAGGAGGCCTGAAAGATTTGAGAAGAGGGGGAAAAGGAAG  
TTTGTCCCTGCTGGATCAGTTCTTGTCATGTAGCCAAGACTGGAGAAACAATGATTCACTGGTCCAAT  
TTAAAGGCTATTTAACTGGAGAAAGTGTGATGGATGATTCAAGCTCAGCTCGAGCCAAGAG  
GTCCTCCCAACCTAATGTCGA

**11773.2.contig**

AAGCAGGCGGCTCCCGCCTCGCAGGGCCGTGCCACCTGCCCGCCGCTCGCTCGCTGCCCGC  
CGCGCCGCGCTGCCGACCGCCAGCATGCTGCCGAGAGTGGCTGCCCGCTGCCXTGCCG

**11775-1&2**

ATCTCTGTATGCCAAATTTAATATAATCTTGAAACAAGTCAGATGAAATAAAATCAAAGTTGCAA  
AACGTGAAGAGTTAACTTAATTGTCAAATATTCCTCATTGCCCAAATCAGTATTTTTTATTCATGCAA  
GTATGCCTCAAAGTCTAAATGATATGATATGATAACACAAACCAAGTTCAAATAGTAAAGCCAGTCAT  
CTTGCATTGTAAGAAATAGGTAAGATTATAAGACACCTTACACACACACACACACACACGTGTGC  
ACGCCAATGACAAAAACAATTGGCCTCTCCTAAATAAGAACATGAAGACCCTAATTGCTGCCAGGAGG  
GAACACTGTGTCACCCCTCCCTACAATCCAGGTAGTTCCCTTAATCCAATAGCAAATCTGGCATATTGA  
GAGGAGTGATTCTGACAGCCACGTTGAAATCCTGTGGGGACCATTGTCACCCACTGGTGCCTGAA  
AAAATGCCAATAATTTCGCTCCACTCTGCTGCTGtCTTCCACATCCTCACATAGACCCCAGACCCGC  
TGGCCCTGGCTGGCATCGCATTGCTGGTAGAGCAAGTCATAGGTCTCGTCTTGACGTACAGAACG  
ATACACCAAATTGCCTGGTCGGTCAATTGTCATAACCAGAGA

*Fig. 1D*

**11777.1&2.cons**

CAGACGGGGTTCACTATGTTGGCTAGGCTGGTCTGAACTCCTGACTCAGGTGATCTGCCTGCCTGGC  
CTCCCAAAGTGCTGGATTACAGGCATAAGCCACTCGGCCCGGCTGATCTGATGGTTCATAGGCTTTTC  
CCCCTTTGCTCAGCACTCTCCTGCCGCCATGTGAAGAAGGACATGTTGCTTCCCTCCACCACG  
ATTGTAAGTTGTTCTGAGGCCTCCCCGGCCATGCTGAACGTGAGTCAATTAAACCTTTTATAAA  
TTATCCAGTTGGGTATGTTATTAGTAGAATGAGAACAGACTAATACAACCCTAAAGGAGACTGACG  
GAGAGGATTCTCCTGGATCCCAGCACTCCTCTGAATGCTACTGACATTCTTCTGAGGACTTAAACTGG  
GAGATAGAAAACAGATTCCATGGCTCAGCAGCCTGAGAGCAGGGAGGGAGCCAAGCTATAGATGACATGG  
GCAGCCTCCCTGAGGCCAGGTGTGGCGAACCTGGCAGTGCTGCcACCCACCCCACCAGGGCCAAGT  
CCTGTCCTGGAGAGCCAAGCCTCAATCACTGCTAGCCTCAAGTGTCCCCAACAGTGGCTAGGGGG  
ACTCAGGGAACAGTCCCAGTCTGCCCTACTTCTTACCCCTACACCTCAAAGTAGACCATGT  
TCATGAGGTCCAAAGG

**11779.2.contig**

AAGCGAGGAAGCCACTGCGGCTCCTGGCTGAAAAGCGGCCAGGCTCGGGAACAGAGGGAACGCGAAG  
AACAGGAGCGGAAGCTGCAGGCTGAAAGGGACAAGCGAATGCGAGAGGAGCAGCTGGCCCGGGAGGCT  
GAAGCCCGGGCTGAACGTGAGGCCAGGCGAGACGGGAGGAGCAGGAGGCTCGAGAGAAGGGCGCA  
GGCTGAGCAGGAGGAGCAGGAGCGACTGCAGAACAGAGGAAGGCCAGGCCGGTCCCAGGGAAAG  
AAGCTGAGCGCCAGCGCCAGGAGCGGGAAAGCACTTCAAGAACGGAGGAAACAGGAGAGACAAGAGCGAA  
GAAAGCGGCTGGAGGGAGATAATGAAGAGGACTCGGAAATCAGAACCGCCAAACCAAGAACGAGGATGC  
AAAGGAGACCGCAGCTAACATTCCGGCCCAGACCCCTGTGAAAGCTGTAGAGACTCGGCCCTGGGCT  
TCCAGAAAGGATTCTATTGCAGAAAGGAAGGAGCTXGGCCCCCAXGGA

**11781 & 37.cons**

CTCTGTGGAAAATGATGAGGAATGAATTACCATACCCATGTTCTCATCCCCAAGCAAAGTGCTGGGTCT  
GATTACTGCAACACAGAGAACGAAGAACGAACTTTCTCATACAGGATCAGCAGGGCTCATCACACTGGG  
CTGGATTCTACTCACCCACACAGACCAGCTCTCCAGTGTGACCTACACACTCACTGCTTACCA  
GATGATGTTGCCAGAGTCAGTAGCCATTGTTGCTCCCCAAGTCCAGGAAACTGGATTCTTAAACTAAC  
TGACCATGGACTAGAGGAGATTCTCTGTGCCAGAAAGGATTCTACACAGCAAGGATCCACCTC  
TGTTCTGTAGCTGCAGCACGTGACTGTTGGACAGAGCAGTGACCATCACAGACCTCGATGAGCGTT  
GAGTCCAACACCTCCAAGAACAAACAAACATACAGTGTACTGTAGCCCTTAATTAGCTTCTAGAAA  
GCTTGGAGTTTGAGATAGTAGAAAGGGGGCATCAXTGAGAAAGAGCTGATTTGTATTCAGGTT  
TGAAAAGAAATAACTGAACATATTCTAGGCAAGTCAGAAAGAGAACATGGTCACCCAAAGCAACTGTAA  
CTCAGAAATTAAAGTTACTCAGAAATTAAAGTAGCTCAGAAATTAAAGAAATGGTATAATGAACCCCCATATA  
CCCTTCCTCTGGATTACCAATTGTTAACATTCTCTCAGCTATCCTCTAATTCTCTAATTCA  
ATTGTTATTTACCTCTGGCTAATAAGGGCATCTGTGAGAAATTGGAAGCCATTAGAAAATCTT  
TGGATTTCTGTGGTTATGGCAATATGAATGGAGCTTACTGGGTGAGGGACAGCTTACTCCATTG  
ACCAGATTGTTGGCTAACACATCCCGAAGAACATGATTGTCAGGAATTATTGTTATTAAATAATTTAG  
GATATTCTCTACAATAAGTAACAAT

*Fig. 1E*

**11781-76-87-37**

CTCTGTGGAAAATGATGAGGAATGAATTACCATACCCATGTTCTCATCCCCAAGCAAAGTGCTGGGTCT  
GATTACTGCAACACAGAGAACGAAAGAACCTTTCCTCATACAGGATCAGCAGGGCCTCATCACACTGGG  
CTGGATTCTACTCACCCCCACACAGACCAGCGTTCTCCAGTGTGACCTACACACTCACTGCTCTTACCA  
GATGATGTTGCCAGAGTCAGTAGCCATTGTTGCTCCCCAAGTCCAGGAAACTGGATTCTTAAACTAAC  
TGACCATGGACTAGAGGAGATTCTCCTGTCGCCAGAAAGGATTCCACACAGCAAGGATCCACCTC  
TGTTCTGTAGCTGCAGCACGTGACTGTTGTGGACAGAGCAGTGACCACAGACCTCGATGAGCGTT  
GAGTCCAACACCTCCAAGAACAAACAAACATATCAGTGTACTGTAGCCCCCTTAATTAGCTTCTAGAAA  
GCTTGGAAGTTTGAGATAGTAGAAAGGGGGCATCACCTGAGAAAGAGCTGATTTGTATTCAGGTT  
TGAAAAGAAATAACTGAACATATTTTCTGGCAAGTCAGAAAGAGAACATGGTCACCCAAAAGCAACTGTAA  
CTCAGAAATTAAAGTTACTCAGAAATTAAAGTAGCTCAGAAATTAAAGAAAGATGGTATAATGAACCCCCATATA  
CCCTTCCTCTGGATTACCAATTGTTAACATTCTCAGCTATCCTCTAATTCTCTAATTCA  
ATTGTTATTTACCTCTGGCTCAATAAGGGCATCTGTGAGAAATTGGAAGCCATTAGAAAATCTT  
TGGATTTCTGTGGTTATGGCAATATGAATGGAGCTTAACTGGGTGAGGGACAGCTACTCCATTG  
ACCAGATTGTTGGCTAACACATCCCGAAGAACATGATTGTCAGGAATTATTGTTATTAAATAATTTCA  
GATATTTCCTCTACAATAAGTAACAATTAAAGTAACAATTAA

**11784-1 & 2**

GGACGACAAGGCCATGGCGATATCGGATCCGAATTCAAGCCTTGGATTAAATAACCTGGAACAGGGAA  
GGTGAAGTTGGAGTGAGATGTCTCCATATCTACCTTGTGCACAGTTGAATGGAACTGTTGGGTT  
AGGGCATCTTAGAGTTGATTGATGGAAAAGCAGACAGGAACCTGGTGGAGGTCAAGTGGGAAGTTGGT  
GAATGTGGAATAACTTACCTTGCTCCACTAAACCAGATGTGTTGCAGCTTCTGACATGCAAGGATC  
TACCTTAATTCCACACTCTCATTAATAAAATTGAATAAAAGGGATGTTGGCACCTGATATAATCTGCCAGG  
CTATGTGACAGTAGGAAGGAATGGTTCCCTAACAGCCAATGCACTGGTCTGACTTTATAAAATTATTA  
ATAAAATGAACTATTATC

**11785.2.contig**

GGCAGTGACATTACCATCATGGGAACCACCTTCCCTTCTCAGGATTCTGTAGTGGAAAGAGAGCAC  
CCAGTGTTGGCTGAAAACATCTGAAAGTAGGGAGAAGAACCTAAAATAATCAGTATCTCAGAGGGCTCTA  
AGGTGCCAAGAACAGTCTACTGGACATTAAAGTGCACAAAGGCATACTTCGGAATGCCAAGTCAAAAC  
TTCTAATTCTGTCTCTCAGAGACAAGTGAGACTCAAGAGTCTACTGCTTAGTGGCAACTACAGAAAA  
CTGGTGTACCCAGAAAACAGGAGCAATTAGAAATGGTCCAATTTCAAAGCTCCGAAACAGGATGTG  
CTTCCCTTGGCCATTAGGGTTCTCTCTTCTTTATTAAACCACT

*Fig. 1F*

**11718-1&2 cons**

TGCGCTGAAAACAACGGCCTCCTTACTGTTAAATGCAGCCACAGGTGCTAGCCGTGGCATCTCAACC  
ACCAGCCTCTGTGGGGCAGGTGGCGTCCCTGTGGCCTCTGGGCCACGTCCAGCCTCTGTCCCT  
GCCTTCGTTCTCGACAGTGTTCCCAGGCATCCCTGGTCACTTGGTACTTGGCGTGGCCTCTGTGCTGC  
TCCAGCAGCTCCTCCAGGXGGTCGGCCCGCTCACCGCAGCCTCATGTTGTGTCCGGAGGCTGCTCACGG  
CCTCCTCCTCGCGAGGGCTGTCTCACCCCTCCGGXGCACCTCCTCCAGCTCCAGCTGCTGGCGGC  
CTGCAGCGTGGCCAGCTCGGCCTGGCCTGCCGCTCTCCTCARAGGCTGCCAGCCGGTCCTCGAA  
CTCCTGGCGGATCACCTGGCCAGGTTGCTGCGCTCGTAGAAAGCTGCTCGTTACCGCCTGCGCATCC  
TCCAGCGCCCGCTCTGCCGCACAAGGCCCTGCAGACGAGATTCTGCCCTCGGC<sub>c</sub>CCCCAAGCT  
GGCCCTTCAGCTCCGAGCACCCTGAAGCTCCGCTCCAGCTGCTCCAGCTGGAGAGCTCGGCCTC  
GTACTTGTCCCCTAAGCGCTTGATGCGGCTCTGGCAGCCTCTCACTCTCCCTGGCCAGCGCCATGT  
CGGCCTCCAGCCGGTGAATGACCAGCTCAATCTCCTGTCCCAGGCTTCCGGATTCTCCCTCAGCTCC  
TGTTCCCGGTTCAGCAGCCACGCCCTCCCTGGTGGCCGGCTCCACGCCTGCCCTCCAGCT  
CCAGCTGCTGCTTCAGGGTATTAGCTCCATCTGGCGGGCTGCAGCGTGGCCA

**13690.4**

CAACTTATTACTGAAATTATAATAGCCTGTCCGTTGCTGTTCCAGGCTGTGATATATTTCTAGTGG  
TTGACTTAAAAATAAGTTAACCTCCCC

**13693.1**

TGCAAGTCACGGGAGTTATTTATTAATTTTTCCCCAGATGGAGACTCTGCGCCAGGCTGGAGTGCA  
ATGGTGTGATCTTGGCTACTGCAACCTCCACCTCTGGGTTCAAGCGATTCTCCTGCCACAGCCTCCGA  
GTAGCTGGATTACAGGTGCCGCCACACACCCAGCTAATTTTATATTTTAGTAAAGACAGGGTTCCC  
CATGTTGGCCAGGCTGGTCTGAACCTTGACCTCAGGTGATCCACCTGCCCTGGCCTCCCAAAGTGTGG  
GATTACAGGCGTGAGCTACCCGTGCCAGCCACTGGAGTTAAAGGACAGTCATGTTGGCTCCAGC  
CTAAGGCGGCATTTCCCCATCAGAAAGCCCGGGCTCTGTACCTCAAAATAGGGCACCTGAAAGTCA  
GTCAGTGAAGTCTCTGCTCTAACCTGGCCACCCGGGGCATTGGCNTCTGACACAGCCTGCCAGGANGCC  
TGCATCTGCAAAAGAAAAGTTCACTTCCTTCCG

**13694.1**

CAGAGAATCTKAGAAAGATGTCGCGTTTCTTTAATGAATGAGAGAAGGCCATTGTATCCCTGAATCATTG  
AGAAAAGGCGGGCGGTGGCGACAGCGCGACCTAGGGATCGATCTGGAGGGACTTGGGGAGCGTGCAGA  
GACCTCTAGCTCGAGCGCGAGGGACCTCCGCCGGATGCCCTGGGAGCAGATGGACCCACTGGAAGT  
CAGTTGGATTCAAGATTCTCTCAGCAAGATACTCCTTGCTGATAATTGAAGATTCTCAGCCTGAAAGCCAG  
GTTCTAGAGGATGATTCTGGTCTCACTCAGTATGCTATCGACACCTCCTAATCTCCAGACGCACAAA  
GAAAATCCTGTGTTGGATGTTGNGTCCAATCCTGAACAAACAGCTGGAGAAGAACGAGGAGACCGGTAAT  
AGTGGGTTCAATGAACATTGAAAGAAAACCAGGTTGCAGACCCCTG

**13694.2**

GAATGTCTGAACAAGGGACCTCTGACCAGAGAGCTGCAGGAGATGCAGAGTGGTGGCAGGAGTGGAG  
CCAAAGAACACCCACCTCCTCCCTGAAGGAGTAGAGCAACCACAGAAGATACTGTTTATTGCTCTGGT  
CAAACAAGTCTCCTGAGTTGACAAAACCTCAGGCTCTGGTACTCTGAATCTGCAGTCACCTTCATAA  
GTTCTGTGCAGACAACTGTTCTTGCTTCCATAGCAGCACAGATGCTTGGGCTAAAGGCATGCTCCT  
CTGACCTTGCTGGACTGTTCTGCTATGGGATATCTCGTGGACTGTTCTCATGCTTAATTGCAGTATTAG  
TGTCTTGCTGGACTGTTCTGCTATGGGATATCTCGTGGACTGTTCTCATGCTTAATTGCAGTATTAG  
CATCCACATCAGACAGCCTGGTATAACCAGAGTTGGTGGTACTGATTGTAGCTGCTTTGTCCACTTCAT  
ATGGCACAAGTATTTCTAACATCCTGGCTCTGGAG

**13695.1**

GAAATGTATATTAATCATTCTCTTGAACGATCAGAACTCTRAAATCAGTTTCTATAACARCATGTAATACAG  
TCACCGTGGCTCCAAGGTCCAGGAAGGCAGTGGTAACACATGAAGAGTGTGGAAAGGGGCTGGAAACA  
AAAGTATTCTTCTTCAAAGCTTCATTCTCAAGGCCTCAATTCAAGCAGTCATTGTCCTGCTTCAAAAG  
TCTGTGTGCTTCATGGAAGGTATATGTTGCTTAATTGAATTGTGCCAGGAAGGGTCTGGAGAT  
CTAAATTAGAGTAAGAAAACCTGAGCTAGAACTCAGGCATTCTTACAGAACTTGGCTGCAGGGTAGA  
ATGAANGGAAAGAAACTAGAACGCTAACAGCTGAAGATAATCCCATCAGGCATTCCCATAGGCCTTGCA  
ACTCTGTTACTGAGAGATGTTATCCTG

**13695.2**

AGTCTGGAGTGAGCAAACAAGAGCAAGAACARRAGAACGCCAAAGCAGAAGGCTCCAATATGAACAAGA  
TAAATCTATCTTCAAAGACATATTAGAAGTTGGAAAATAATTGTAACAGACAAGTGTGTTAAGAGTG  
ATAAGTAAATGCACGTGGAGACAAGTGCATCCCCAGATCTCAGGGACCTCCCCCTGCCTGTCACCTGGG  
GAGTGAGAGGACAGGATAGTGCATGTTCTGTCTGAATTAGTTATGCTGTAATGTTGCTCTGA  
GGAAGCCCCTGGAAAGTCTATCCACATATCCACATCTTATATTCCACAAATTAGCTGTAGTATGTACCC  
TAAGACGCTGCTAATTGACTGCCACTCGCAACTCAGGGCGGCTGCATTAGTATGGTCAAATGATT  
CACTTTATGATGCTCCCAAGGTGCCTGGCTTCTCTCCAACTGACAAATGCCAAGTTGAGAAAAAT  
GATCATAATTAGCATAACCGAGCAATCGCGACCCC

**13697.1**

TAGCTGTCTCCTCACTCTTATGGCAATGACCCATATCTTAATGGATTAAGATAATGAAAGTGTATTTCTTA  
CACTCTGTATCTATCACCAAGCTGAGGTGATAGCCCGCTGTCTTCATTGTCATCCATATTCTGGGACTCAGG  
CGGGAACTTCTGGAATTGCCAGGGAGCATGGCAGAGGGGCACAGTGCATTCTGGGGAAATGCACATT  
GGCTCAGCCTGGTAATGAGTGATATACATTACCTCTGTTCACAACTCATTGCCAGCACCAGTCACAAGG  
CCCCACCAAATACCAGAGCCCAGAAATGTAGTCCTGTTGATATGGTTGCTGTCCCACCCAAATCTC  
ATCTGAATTGTAAGCTCCATAATTCCCATGTGTTGGGAGGGACCTGGTG

*Fig. 1H*

**13697.2**

ATCATGAGGATGTTACCAAAGGGATGGTACTAACCAATTGTATTGCTGTTTCACACTGCTTGAAAGATA  
CTACCTGAGACTGGTAATTATAAACAAAAGAGATTAATTGACTCACAGTCTGCATGGCTGAAGAGGCC  
TCAGGAAACTACAGTCATGGTGGAAAGGCAAAGGAGGAGCAAGGCATGTCTTACATGTCAGTAGGAGAGA  
GAGCGAGAGCAGGAGAACCTGCCACTTATAAACCAATTGAGATCTCATAACTCCATCATGAGAAAAACATG  
GAGGAAACCACCCATGATCCAATCACCTCCGCCAGGTCCTCCCTCGACACGTGGGGATTATAATTCA  
GGATTAGAGGGACACAGAGACAAACCATATCATCATTGAGAAATCCACCCATAGTCCAATCAGCTCC  
TACCAGGCCACCTCCAACACTGGGATTGCAATTCAACATGAGATTGGATGGGACACAGATTCAAAC  
CATATCATA

**13699.1&2**

CATGGCCTTCTCCTAGAGGCCAGAGGTGCTGCCCTGGCTGGAGTGAAGCTCCAGGCACTACCAGCTT  
TCCTGATTTCCCGTTGGTCCATGTGAAGAGCTACCACGAGCCCCAGCCTCACAGTGTCCACTCAAGGGC  
AGCTTGGCCTCTGTCCGCAGAGGCAGGCTGGTGTACCCCTGGGAACCTGACCCGGAAACAACAGGTG  
GCCAGAGTGAGTGTGGCTGGCCCTAACCTAGTGTCCGCCTCTCCTGGAGCCAGTCTGAG  
TTAAGGCATTAAGTGTAGATAACAGCTCCTGTGGCTGGAAAACACCCCTCTGCTGATAAAAGCTCAGG  
GGGCACTGAGGAAGCAGAGGCCCTGGGGTGCCTGAAGAGAGCGTCAGGCCATCAGCTCTGTC  
CCTCTGGTGTCCCACGTCTGTTCCACCCCTCCATCTCTGGAGCAGCTGCACCTGACTGCCACCG  
GGGAGTGGAGGCACAGGCTCAGGTGGCCGGCTACCTGGACCCCTATGGCTACAAAGTAGAGTTGG  
CCCAGTTCCACCTGAGGGAGCACTGACTCTAACAGTCTTGCCTGCCATCATCTGGG  
TGGCTGGCTGTCAAGAAAGGCCGGCATGTTCTAAACACAGCCACAGGAGGCTGTAGGGCATCTTCC  
AGGTGGGAAACAGTCTTAGATAAGTAAGGTGACTTGCCTAAGGCCTCCAGCACCCCTGATCTGGAGTC  
TCACAGCAGACTGCATGSAACAACGTGGAAACGAAACATGCCTCAGTATAAAA

**13703.3**

CCAGAACCTCTCTTTGGAGAATGGGGAGGCCTTGGAGACACAGAGGGTTCACCTGGATGACCT  
CTAGAGAAATTGCCAAGAAGCCACCTCTGGTCCACCTGCAGACCCACAGCAGTCAGTGGTCAG  
GCCCTGCTGTAGAAGGTCACTTGGCTCCATTGCCTGCTTCAACCAATGGCAGGGAGAGAAGGCCTTATT  
TCTGCCACCCATTCTCCTGTACCGACCTCCGTTTCAGTCAGYGTCCAGCAACGGTACCGTTAC  
ACAGTCA

**13705.1**

TGCATGTAGTTTATTATGTGTTSGTCTGGAAAACCAAGTGTCCCAGCAGCATGACTGAACATCACTCAC  
TTCCCCTACTGATCTACAAGGCCAACGCCAGAGGCCAGACCAGGATTCCAACACACTGCACGAGAATA  
TTGTGGATCCGCTGTCAGGTAAAGTGTCCGTACTGACCCARACGCTGTTACGTGGCACATGACTGTACAGT  
GCCACGTAACGCACTGTACTTTCTCCATGAACAGTTACCTGCCATGTATCTACATGATTAGAACATT  
GAACAGTTAATTCTGACACTTGAATAATCCCATTAAAACCGTAAATCACTTGTGTTGTAACGACAACA  
TAGCATCACTTACGACAGAATCATGGAAAAACAGAACAGAACATACATCTAAAAAATGCTGGGG  
TGGGCCAGGCACAGCTTCACGCCGTAAATCCCAGCACTTGGAGGCTTAAGCGGGTG

**13705.2**

TGGGGCGGAAAGAACCAAGGCCAAGGAGCTGGTGCAGCTGCAGCTGGAGGCCGAGGAGCAGAGG  
AAGCAGAAGAACGGCAGAGTGTGCGGCCCTGCACAGATACCTCACTTGCTGGATGGAAATGAAAATTA  
CCCGTGTCTTGTGGATGCAGACGGTATGTGATTCTCCCACCAATAACCAACAGTGAGAAGACAAAGG  
TTAAGAAAACGACTTCTGATTGTTTGGAAAGTAACAAGTGCACCCAGTCAGATTGCAAGGATGTCA  
TGGATGCCCTCATTCTGAAAATGGCAAGAAATGAAAAAGTACACTTAGAAAATAAGAGGAAGGATCACTC  
TCAGATACTGAAGCCGATGCAGTCTGGACAACCTCCAGATCCCACACGAATCCCAGTGCTGGAAAGGA  
CGGGCCCTTCTGGTGGAACANGTCCCAGTGATCTTGAANGAACCTGAANGTGGTGA  
CCCCGTCCAAGGCCGACCTTGGCCAC

**13707.4**

TCCCGCGCTCGCAGGGCNCGTGCCACCTGCCYGTCCGCCGCTCGCTCGCTCGCCCGCCGCCGCG  
TGCCGACCGYCAGCATGCTGCCAGAGTGCGCTGCCGCTGCCGCTGCCGCCGCCGCTGCTG  
CCGCTGCTGCCGCTGCTGCTG

**13708.1&2**

GGCGGGTAGGCATGGAAGTGGAACTGAGAAGAACGAAGAACGCTTCAGACTACGTGGGAAGAACATGAAAAACCAA  
AATTATGCCAACGATTCAAGCAAGGGGACAGGGAGCTCCAGCCCCAGAGAGCCTATTATTAGCAGTGAGGAG  
CAGAACAGCTGATGCTGACTATCACAGAACAGAGGAGCTAACAGAGATTGGAAGAAAATGATGATGA  
TGCCTATTAAACTCACCATGGCGGATAACACTGCTTGAAGAACATTTCATGGAGTGAAAGACATAAA  
GTGGAGACCAAGATGAAGTCAACCAGCTGATGACACTTCAAAGAGATTAGCTCACCT

**13709.1**

TCTGAAGGTTAAATGTTCATCTAAATAGGGATAATGRTAACACCTATAGCATAGAGTTGTTGAGATTAAA  
TGAGATAATACATGAAAATTATGTGCCTGGCATACAGCAAGATTGTTGTTGATGATGATGATG  
ATGATAATATTTCTATCCCCAGTCACAAC TGCTGAACCTATTAGATAATCAATACATGTTCTGAACCT  
AGATCAATTCCCCATGTTGACTGATGAAGCCCTACATTCTTAGAGGAGATGACATTGAGCAA  
GATCTTAAAGAAATCAGATGCCTCACCTGACCACTGCTGGTATCCCAGGCACCTTGACATCTCTCC  
ATTAGCTCTCATCTCACCAAGCCCATCATTATTGTATGTGCTGCCCTCTGAAGCTTGCAAGCTGGCTACCATCM  
GGTAGAATAAAAATCATCCTTCATAAAATAGTGACCCCTCCTTTTATTGCATTCCAAAGCCAAGCACC  
GTGGGANGGTAG

*Fig. 1J*

**13709.2**

TATGAAGAAGGGAAAAGAAGATAATTGTGAAAGAAATGGGTCCAGTTACTAGTCTTGAAAGGGTCAGTC  
TGTAGCTCTTCTTAATGAGAACATAGGCAGCTTCAGTTGCTCAGGGTCAGATTCCCTAGTGGGTATCTAAT  
CACAGGAAACATCTGTGGTCCCTCCAGTCTCTTCTGGGGACTGGGCCACTTCTCATTCAATTAAATT  
AGAGGAAATAGAACTCAAAGTACAATTACTGTTACAATGCCACAAAGACATGGTGGGAGCTATT  
CTTGATTGTGAAAATGCTGTTGTGCTCATATGGTCCAAAATTGGGTGCTGGCCAAGAGAGA  
TACTGTTACAGAACGCCAGCAAGAACCTCTGTTATTACACCCCCGGGGATATCAGGAATTGACTCCAG  
TGTGTGCAAATCCAGTTGGCCTATCTTCT

**13712.1&2**

TGAGGGACTGATTGGTTGCTCTGCTATTCAATTCCCCAAGCCCAC TTGTTCCCTGCAGCGTCCTCCTTCT  
CATTCCCTTAGTTGATGCCCTCTCTTCACTGAGACCTTCCCTTGTATGTCGCCTTTCTTCTTCTGCTT  
TTCTGATGTTCTGCTCAGCATGTTCTGGGTGCTCTCATCTGCATCATTCCCTTCAGATGCTGTAGCTTCTT  
CCTCCTCTTCTGCCTCCTTCTTTCTTTCTTTGGGGGCTTGCTCTGACTGCAGTTGAGGGGCC  
CAGGGTCCTGGCCTTGAGACGAGCCAGGAAGGCCCTGCTCCTGGCCTCTAGGCGAGCAAGCTGGCCTT  
CATTGTGATCCCAAGACGGCAGCCTGTTGCTGCTGTTGCCCTCACAGGCTGGAGCAGCATCTCATCAG  
TCAGAATCTTGGGGACTGGACCCCTGGTTGTCGTCACTGCAGCTCCAAGTCTTGTTGGCTTCT  
CTCCACCTGAAGTCAATGTAGCCATCTCACAAACTCTGATACAGCAAGTGGCTGGATGATTATAAC  
GGGTGGTCTCCTAGAAAGGCTCTTATCTGACTCCATCCTGCCAGTTCCACTACCAAGTGGCCGCA  
GTCTTGTGAAGAGCTCATTCCACCACTGGTTGTGAACCTGGCAGGGCATGTCCTACCCATGAGT  
GTCTGCTCAGYGTACCCCTGAGAGCCTGAGTGATACCATTCTCCTCCG

**13714.1&2**

GACAACATGAAATAATCCTAGAGGACAAAATTAAACTCAATAGAGTGTAGTAGTTAAAAACTCGAAAAAT  
GAGCAAGTCTGGGGAGTGGAGGAAGGGCTATACTATAAAATCCAAGTGGGCCTCTGATCTAACAGCC  
ATGCTCATTATAACACATCTGAACTGGACATACCACCTTACGCAGGAAACAGGGCTGGAACCTCTAAGG  
GAAATTAAACATGCACCACCCACATCTAACCTACCTGCCGGTAGGTACCATCCCTGCTCGCTGAAATCAG  
TGCTC

**13716.1&2**

TTGGAATTAAATAACCTGGAACAGGGAGGTGAAAGTTGGAGTGAGATGTCTTCCATATCTATACCTTGT  
GCACAGTTGAATGGGAACTGTTGGTTAGGGCATCTAGAGTTGATTGATGGAAAAGCAGACAGGAAC  
TGGTGGAGGTCAAGTGGGAAGTTGGATGTGGAATAACTTACCTTGCTCCACTAAACCAGATG  
TGTTGCAGCTTCTGACATGCAAGGATCTACTTAAATTCCACACTCTCATTAATAAAATTGAATAAAAGGGAA  
TGTTTGGCACCTGATATAATCTGCCAGGCTATGTGACAGTAGGAAGGAATGGTTCCCTAACAGCCCAA  
TGCACGGTCTGACTTATAAATTATTAATAAAATGAACATTATC

*Fig. 1K*

**13718.2**

AAACTGGACCTGCAACAGGGACATGAATTACTGCARGGTCTGAGCAAGCTCAGCCCCCTACCTCAGGGC  
CCCACAGCCATGACTACCTCCCCCAGGAGCGGGAGGGTGAAGGGGGCCTGCTCTGCAAGTGGAGGCCAG  
AGTGGAGGAATGAGCTCTGAAGACACAGCACCCAGCCTCTCGACCAGCCAAGCCTTAAGTGCCTGCCT  
GACCCTGAACCAGAACCCAGCTGAAGTGCCTCCAAGGGACAGGAAGGGCTGGGGAGGGAGTTACAA  
CCCAAGCCATTCCACCCCCCTCCCTGCTGGGGAGAATGACACATCAAGCTGCTAACAAATTGGGGAGGG  
GAAGGAAGAAAATCTGAAAACAAAATCTTGT

**13722.3**

CATGCGTTCACCACTGTTGCCAGGCTGGTCTCGAACTCCTGGCCTCAAGCAATCCACCCGCCTCAGCCT  
CCAAAAGTGCTGGATTACAGATGTGAGCCATGGCACCATGCCAAAAGGCTATAATTCCCTGGCTCTGTGTT  
CCGAGACTGCTTTAATCCAACTTCTACATTAGATTTAAAAAATTTTATTGATGGTCAATCTGGAACAT  
AATTACTGCATCTTAAGTTCCACTGATGTATAGAAGGCTAAAGGCACAATTATCAAATCTAGTAGAG  
TAACCAAACATAAAATCATTAATTACTTCAACTTAATAACTAATTGACATTCCCTAAAAGAGCTGTTCAAT  
CCTGATAGGTTCTTATTTCAAAATATTTGCCATGGGATGCTAATTGCAATAAGGCGATAATGAGA  
ATACCCCAAATGGA

**13722.4**

GTTGGACCCCCAGGGACTGGAAAGACACTTCTTCCCCGAGCTGTGGCGGGAGAAGCTGATGTTCTTTTA  
TTATGCTTCTGGATCCGAATTGATGAGATGTTGTGGGTGTGGGAGGCCAGCGTATCAGAAATCTTTTAG  
GGAAGCAAAGGCGAATGCTCCTGTGTTATTTATTGATGAATTAGATTCTGTTGGTGGGAAGAGAAATTGA  
ATCTCCAATGCATCCATTCAAGGCAGACCATAATCAACTTCTGCTGAAATGGATGGTTAAACCCAAT  
GAAGGAGTTATCATAATAGGAGCCACAAACTCCCAGAGGCATTAGATAATGCCTTAATACCGTCCTGGTCG  
TTTGACATGCAAGTTACAGTCCAAGGCCAGATGTAAGGTGAAACAGAAATTGAAATGGTATCTCAA  
TAAAATAAGTTGATCAATCCGTTGATCCAGAAATTAGCCTCGAGGTACTGGTGGCTTCCGGAAAGC  
AGAGTTGGGAGAATCTT

**13724-13698-13748**

GCCTACAACATCCAGAAAGAGTCTACCCCTGCACCTGGTGCCTCGTCTCAGAGGTGGGATGCAGATCTCGT  
GAAGACCTGACTGGTAAGACCCTCACTCTCGAACGTGGAGGCCAGTGCACACCATTGAGAACGTC  
AAGATCCARGACAAGGAAGGCRTYCCTCCTGACCAGCAGAGGTGATCTTGCCGGAAAGCAGCTGGAAG  
ATGGDCGCACCCCTGTCTGACTACAACATCCAGAAAGAGTCYACCCCTGCACCTGGTGCTCCGTCTCAGAGGT  
GGGATGCARATCTCGTGAAGACCCCTGACTGGTAAGACCCTCACCCCTCGAGGTGGAGGCCAGTGCACACCA  
TCGAGAATGTCAAGGCAAAGATCCAAGATAAGGAAGGCATCCCTCCTGATCAGCAGAGGTGATCTTGCT  
GGGAAACAGCTGGAAGATGGACGCACCCCTGTCTGACTACAACATCCAGAAAGAGTCCACTCTGCACTTGGT  
CCTGCGCTTGAGGGGGGGTGTCTAAGTTCCCCTTTAAGGTTCMACAAATTTCATTGCACTTCCCTTCA  
ATAAAGTTGTTGCATTCCC

*Fig. 1L*

**13730.1**

GAACCTGGGCCCTGAGCCCAAGTCATGCCTGTGTCGCATCTGCCGTGTACCTCTGKCTGCCCTCAC  
CCCTCCCTCCTGGTCTTCTGAGCCAGCACCATCTCCAAATAGCCTATTCCCTGCAAATCACACACACAT  
GCGGGCCACACATACCTGCTGCCCTGGAGATGGGAAGTAGGAGAGATGAATAGAGGCCATACATTGTA  
CAGAAGGAGGGGCAGGTGCAGATAAAAGCAGCAGACCCAGCGCAGCTGAGGTGCATGGAGCACGGTTG  
GGGCCGGCATTGGGCTGAGCACCTGATGGGCCTATCTGTGAATCCTCGAGGCAGCGCCACAGCAGAG  
GAGTTAAGTGGCACCTGGCCGAGCAGAGCAGGAGACTGAGGGTCAGAGTGGAGGCTAAGCTGCCCTGG  
AACTCCTCAATCTGCCTGCCCTAGTATGAAGCCCCCTTCCTGCCCTACAATTCTGA

**13732.1**

ATGGATCTTACTTGCCACCCAGGTTGGAGTGCAGTGCAATCTGGCTCACTGCAGCCTAACCTCCC  
AGGCTCAAGCTATCCTGCCAAAGCCTCCACATAGCTGGACTACAGGTACACNGCCACCACACCCAG  
CTAAAATTTGTATTTTGATAGAGACGGGATCTGCCACGTTGCCAGGCTGGTCCATCCTGACCTCAA  
GCAGATCTGCCACCTCAGCCCCAACGTGCTAGGATTACAGGCGTGAGCCACCGCACCCAGCCTTGT  
TTGCTTTAATGGAATCACAGTCCCCCTCCGTCTCAGCAGCTGTGAGAAATGCTTGCATCTGTG  
ACCTTATGAAGGGGAACCTCCATGCTGAATGAGGGTAGGATTACATGCTCCTGTTCCGGGGTCAAGA  
AAGCCTCAGACTCCAGCATGATAAGCAGGGTGAG

**13732.2**

ATAGGGGCTTAAGGAGGAAATCAGGTTCAATGAGGCGTAAGGCCAGGGCTTTATCCAGTAAGACTGG  
GGTCCTTAGATGAGAAAGAGACACCCGAGGTCTCTCTGCCGTGTAGGATGCATCAAGAAGGGCGC  
CGTCTGCAAGCGAAGGAGAGGCGCACCAGAAACCGACACCTCATCTGGACTTGCGACGCTCTAGAACT  
GAGAAAATAACTGTCTGGTTAAGCCACCCAGTTGTAGTATTCTTTATGGCTCCTAAGCAGACTAAC  
AAACAAACACCCAAAATTAACGTGATGGCTCGCTGTCTGTAAAAATTGCTATGAGAGAACTTTCACTCA  
CTGTTTGAGTTCTCCCTCAGTCCCTGGTTCTTCTCACATAATCCAATTCAATTATAGTTCATGG  
CCCAGGCAGAGTCATTCATCACGGCATCTCCTGAGCTAACCCAGCACCTGCTCTGCTCACTCTTACTGG  
CTGCTCATCATCAGCCCTTTGCAGAGATTCAATTCCCTCCGTGCCAGGTACTTCACGCACCAAGCTCA

*Fig. 1M*

**13735.1**

GGATAATGAAGTTGTTTATTAGCTGGACAAAAGGCATATTCTCTATTTCTTACAACAAATATCCCC  
AAAATAAGCAAGCATATATCTGAATGTGAATAATCCAGTGATAAACAGAGCAGTACTTAAAAGAAA  
AAAAAAATATGTATTCTGTCAAGGTTAAATGAGAATCAAACCAACTCTGCTAATCATTATTTTGCTT  
TCTTTGGTTAAGAGAGGCAATGCAATACACTGAAAAGGTTTATCTTATCTGGCATTGGAATTAGACAT  
ATTCAAACCCCAGCCCCATTCCAACCTTAAGACCACAAAGTAATTACTTTCTGAACATTGGTTT  
TTCTGGAAAATGGGAATTATAAAAGACTTGCAGACTCTTATGAGATTAAGATAATGTATGAAATTCT  
TTCTCTTTTACTCTTTCTTGTAGATGGAGTCTCACCCCGTCACCCAGGCTGGAGTACAGTG

**13735.2**

CCACTGCACTCCAGCCTGGGTGACGGAGTGAGACTCTGTCTAAAAAAAAACAAACAAACAAACAAAAAA  
ACTGAAAAGGAAATAGAGTCTCTTCTCATATATGAATATATTATTCACAGATTGATCACCTACCA  
TATGCTTGGTATTGTTCTAATTGCTGGGATACAGCAAGAGGTTCTGCAGAACTTCATGGAGCATGAAAGTA  
AATAAACAAAGTTAATTCAAGGCCAGGCATGGTGCTCACACCTTAGTCCCAGCAGTTGGGAGGCTGA  
GGCAGGTGGATCACTGGGCCAGGAGTTCAAGGCTGCAGTGAGCCAAGATTGTGCCACTACTCTCAGG  
CTGGGCAACAGAGCAAGACCCCTGTCAGGGGGACAAAAGTTAATTCAAGATTGTTAAGTGCTGTAAA  
GGAAGTAAATAGGTTGATATTCAAGAGAGCACCTGAAGGCCAGGCGTGGCTCACGCCTGTGGCTAA  
CGCTTGGGAAGCCCGAGCGGGCGGATCACAAGGTCAAGGAGAATTGGCCAGGCATGGT

**13736.1**

AGAATCCATTATTGGTTTAAACTAGTTACACAACGTGAAATCAGTTGGCACTACTTATACAGGGATTAC  
GCCTGTGATGCCGACACTAAATACTGTACCAAGGACACTGCTGTGCTTAGGTCTGTATTCACTTCAG  
CATGTAGATACTAAAAATATACTGTAGTGTCTTAAGGAAGACTGTACAGGGTGTGCAAGATGACAT  
TCACCAATTGTGAATTATTCAACCCAGAAGATAACCTTCACTCTATAAAACTGTCAAGGCAAACATGTGG  
TGTTAGCATTGAGAGATGCACACAAAATGTTACATAAAAGTTCAAGACATTCTAATGATAAGTGAACGTGAAA  
AAAAAAAAACCCACATCTCAATTGTAACAAGATAAAGAAAATAATTAAAAACACAAAAATGGCATTCA  
GTGGTACAAGGC

**13737.1&2**

CAAATTTAATATAATCTTGAACAAAGTCAGAKGAATAAAATCAAAGTTGCAAAACGTGAAGATTAA  
ACTTAATTGTCAAATATTCTCATTGCCCAAATCAGTATTCTTATTCTATGCAAAAGTATGCCTTC  
CTGCTTAAATGATATGATACACAAACAGTTCAAATAGTAAAGCCAGTCATCTGCAATTGTA  
GAAATAGTAAAGATTATAAGACACCTTACACACACACACACACACACACACACACGTGTGCAACGCCAAT  
GACAAAAAAACAATTGGCCTCTCCTAAATAAGAACATGAAGACCCCTTAATTGCTGCCAGGAGGGAACACTG  
TGTCACTCCCTACAATCCAGGTAGTTCTTAATCCAATAGCAAATCTGGCATATTGAGAGGAGTG  
ATTCTGACAGCCACSGTTGAAATCCTGTGGGAACCATTCACTGTCCACCCACTGGTGCCTGAAAAAATGC  
CAATAATTTCGCTCCACTCTGCTGCTCTCCACATCCTCACATAGACCCAGACCCGCTGGCCC  
CTGGCTGGCATCGCATTGCTGGTAGAGCAAGTCATAGGTCTCGTCTTGACGTACAGAAGCGATACACC  
AAATTGCCTGGTCGGTATTGTCATAACCAG

**13738.1**

TTTGACTTAGGGGCTGAACATTACTTGCCTGAACTATTTAAGGTGCTGCAATATTTARACCYTATATATCTTCATTA  
TGCCATCTTATCTCTAATGBCAAGGGAACAGWTGCTAAMCTGGCTCTGCATTWATCACATTAAAATGGC  
TTCTTGAAAATCTTCTTGATATGAATAAAGGATCTTAVGCCATCATTAAAGCMGGNTCTCTCCAAC  
ACGAGTCTGCTSASGGGGGGKGAGCTGTGAACCTGGCTGAAGGCTTCCCACACACTGCAATGACMT  
GGTTCTGACCAGBGTGAGTTA

**13738.2**

AGAGAAGCCCCATAATGCAATCAGTGTGGGAAGGCCTCAGTCAGAGCTCAAGCCTTCCATCATC  
GGGTTCATACTGGAGAGAAACCCATGTATGAAATGCGGCAGAGCCTTGGTTAACTCTCATCTTA  
CTGAACACGTAAGGATTCACACAGGAGAAAACCCATGTTGTAATGAGTGCAGCAAAGCCTTCGTCGG  
AGTTCCACTCTGTTCAGCATCGAAGAGTTCACACTGGGGAGAAGCCCTACAGCTGCGTTGAATGTGGAA  
AGCTTCAGCCAGAGCTCCAGCTCACCTACATCAGCCAGTTCACACTGGAGAGAAGCCCTATGACTGT  
GGTACTGTGGGAAGGCCTCAGCCGGAGGTCAACCCTATTAGCATCAGAAAGTTCACAGCGGAGAGA  
CTCGTAAGTGCAGAAAACATGGTCCAGCCTTGTTCATGGCTCCAGCCTCACAGCAGATGGACAGATCCC  
ACTGGAGAGAAGCACGGCAGAACCTTAACCATGGTCAAATCTCATTCTGCGCTGGACAGATT

**13739.1&2**

GAGACAGGGTCTCACTTGTCACCCAGGCTGGAATGCAGTGGTGCATCTACGTAGCTACTGCAGCCCT  
GACCTCCTGGACTCAAACAATTCTCCTGCCTCAGCCCTGCAAGTAGCTGGACTGTGGGTGCATGCCACCA  
TGCCTGGCTAACCTTGATGTTGAAAGATGGGTTTGCCATGTTGCACATGCTGGTCTGAACCT  
GAGCTCAAACGATCTGCCACCTCGGCCTCCAGAATGTTGGATTACAGGGTAAACCACCGCCTGG  
CCCCATTAGGGTATTCTTAGCATCCACTGCTCACTGAGATTAATCATAAGAGATGATAAGCACTGGAAGAA  
AAAAATTAACTAGGCTTGGATATTTTCTTCTTCTAGCTTATACAGAGGATTGGATCTTAGTTCT  
TTAACTGATAATAAAACATTGAAAGGAAATAAGTTACCTGAGATTACAGAGATAACCGGCATCACTCCCT  
GCTCAATTCCAGTCTTACCATCAATTATTTCTAGAGGTGCAGGATAAGGCCTTAGTCTGCTTCGCA  
CTTTTCTCCACTTTTGTAACCTGTTGCCTGACAATGGAATTGACAGCGTATGCCATGACTATTCCAT  
TTGTCAGGCATACGCTGTCAATTCCACCAATCCCTGTCTCTTGGAGAGATCTCTTATCAGCTAGT  
CCTTGGCAAAAGTAATTGCAACTCTTAGGTATTCTATTGTCCGTTCACTGGTGGAACCCCTGGGACC  
AGGACTAAAACCTCCAG

**13741.1**

ATCTCATATATATTCTCCTGACTTATTGCTTGCTTGNCAAGCATTAAAATATCACAGAGACAAA  
ATAGAGCGGCTTCTGGTGGAACGCATGGCAGTCAGGACAAAATACAAAATAGGGGCTCTGTCTTCT  
CATACATCATACAATTTCAGTATTGAAAGAGCTACTCTATGAAACAAAGAGCTACT  
ATGAGACAAGATAGTTATGCATCCTAGGAAGAGAATGGGAAGAAAGAACGGGGCAGTTGGGTACAGAT  
TCCTGTCCCCTGTTCCCAGGGACCACTACCTCCTGCCACTGAGTCCCCACAGCCTACCCATCATGTC  
ACAGGGCAAGTGCCAGGGTAGGTGGGGACCACTGGAGACAGGAACCAACTTGGCCTGGAAG  
ATAAGGAGAAAGTCTCAGAAACACACTGGTGGGAAGCAATCCCACNGGCCGTGCCCCANGAGCTTCCAC  
CTGCTGCTGGCTCCCTGGGTGGCTTGGGAACAGCTGGCAGGCCCTTGGTGGGNCCAAGTGG  
CCTTGGGCCGTGGAAAG

**13742.1**

AAACATTGAGATGGAATGATAGGGTTCCAGAACATCAGGCCATATTTAACTAAATGAAAATTATGATTAT  
AGCCTTCTCAAATACCTGCCATACTGATATCTCAACCAGAGCTAATTTACCTCTTACAATTAAATAAGC  
AAGTAACTGGATCCACAATTATAATACCTGTCAATTTCTGTATTAAACCTCTATCATAGTTAACGCCTAT  
TAGGGTACTTAATCCTACAAATAACAGGTTAAACACTCACCTCAATAGGCAACTGCCCTCTGGTTCTTC  
TTGACTAAACAATCTGAATGCTTAAGATTCCACTTGGTGCTAGCAGTACACAGTGTACACTCTGTAT  
TCCAGACTCTAAATTATAGAAAAAGGAATGTACACTTTGTATTCTTGAGCAGGGCCGGAGGCAA  
CATCATCTACCATGGTAGGGACTTGTATGCATGGACTACTTA

**14351.1**

ACTCTGTCGCCAGGCTGGAGCCCABTGGMGCATCTGACTCCCTGCAAGCTMCGCCTCACAGGWTC  
TGCCATTCTCCTGCCTCAGCATCTGGAGTAGCTGGACTACAGGCGCCAGCCACCATGCCAGCTAATT  
T

**14351.2**

ACCTAAAGACATAGGAGAATTATACTGGGAGAGAAAGCTTACAAATGTAAGGTTCTGACAAGACTGGG  
AGTGATTCACACCTGGAACAACATACTGGACTTCACACTGGABAGAAACCTTACAAGTGTAAAGTG  
AAAGCCTTGGCAAGCAGTCAACACTTATTACCATCAGGCAATTCA

**14354.2**

AGTCAGGATCATGATGGCTCAGTTCCCACAGCGATGAATGGAGGGCCAATATGTGGGCTATTACATCTG  
AAGAACGTACTAACATGATAAACAGTTGATAACCTCAAACCTTCAGGAGGTTACATAACAGGTGATCAAG  
CCCGTACTTTTCTACAGTCAGGTCTGCCGGCCGGTTAGCTGAAATATGGCCTTATCAGATCTGA  
ACAAGGATGGGAAGATGGACCAAGCAAGAGTTCTATAGCTATGAAACTCATCAAGTTAAAGTTGCAGGGC  
CAACAGCTGCCTGTAGTCCTCCCTCATGAAACAACCCCTATGTTCTCCACTAATCTGCTCGT  
TTGGGATGGGAAGCATGCCAATCTGTCCATTCATCAGCCATTGCCCTCAGTTGCACCTATAGCAACACC  
CTTGTCTCTGCTACTCAGGGACCAGTATTCCCTCCAATGATGCCTGCT

**14354.1**

CTTCGATTCCTCAATTGTCACGTTGATTTATGAAGTTGTTCAAGGGCTAAGTGTGTATTAGCT  
TTCTCTGAGTTCCCTCAGCTGATTGTTAAATGAATCCATTCTGAGAGCTAGATGCAGTTCTTTCAAGA  
GCATCTAATTGTTCTTAAGTCTTGGCATAATTCTCTTCTGATGACTTCTATGAAGTAAACTGATCCC  
TGAATCAGGTGTACTGAGCTGCATGTTAAATTCTTCGTTAATAGCTGCTTCAGGGACCAGATAG  
ATAAGCTTATTGATATTCTTAAGCTTGGTGAAGTTGTCGATTCCATAATTCCAGGTACACTGGT  
TATCCCAAACCTCT

**16431.1.2**

TGGAGGTGAAACGGAGGAAGAAAGGGGGCTACCTCAGGAGCGAGGGACAAAGGGGGCGTGAGGCACC  
TAGGCCGCGGCACCCCGCGACAGGAAGCCGTCTGAACCGGGTACCGGGTAGGGGAAGGGCCCGCG  
TAGTCCTCGCAGGGCCCCAGAGCTGGAGTCGGCTCCACAGCCCCGGCGTGGCTCTCACTCCTGG  
ACCTCCCCGGCGCCCGGGCTGAGGACTGGCTCGCGGAGGGAGAAGAGGAAACAGACTTGAGCAGCTC  
CCC GTTGTCTCGCACTCCACTGCCGAGGAAC TCTCATTTCTCCCTCGCTCCTCACCCCCCACCTCATGT  
AGAAAGGTGCTGAAGCGTCCGGAGGGAGAAGAACCTGGCTACCGTCTGGCCTCCMCCCCCTCC  
CGGGGCGCTTGGTGGCGTGGAGTTGGGTTGGGGTTCTTTGGAGTGCTGG  
GAAC TTTTCCCTCTTCAGGT CAGGGAAAGGAATGCCAATT CAGAGAGACATGGGGCAAGAAGGA  
CGGGAGTGGAGGAGCTTCTGGAACCTTGAGCCGTATCGCTAACAGCAGAGAGCG  
TCACCGCTTGGTATCGAACAGCAGCATAAGTCAAACACTCCAAGAACATGGGGTTGGTACCCCC  
GAAGCAGCATCCCTGGCACAGTTATCAAACCTTGGTGGAGTATGATATCAGCTCTGATTCCGACAC  
CTTCTCCGATGACATGGCCTCAAACAGACCGAACGACGAACGTCGTGGATCAGATC GGAGC  
GACCGCCTGCACAAACATCGTACCCACAGCGTCCCAGGACTTAAGCTAAACAGACCG

**16432-1**

GACATGTTGCCTGCAGGGACCAGAGACAATGGGATTAGCCAGTGCTCACTGTTCTTATGCTCCAGAG  
AGGATGGGGACAGCTCTCAGGT CAGAATCCAGGCTGAGAAGGCCATGCTGGTTGGGGCCCCCGGAAGC  
ACGGTCCGGATCTCCCTGGCATCGCGTAGACCCGCTGCTCAGGCTGGGTACCAAACATGCTCTG  
TACTGTTTGGCCCCATGCGGTGAGAGGAAAACCTAGAAAAAGATTGGTCGTGCTAAGGAATCAGCTGCC  
CCTCATCCTCCGCATCCAATGCTGGTGACAACATATTCCCTCTCCAGGACACAGACTCGGTGACTCCACA  
CTGGGCTGAGTGGCCTCTGGAGGCTCGTGGCCTAAGGCAGGGCTCCGTAAGGCTGATGGCTGA  
GTGGGGTGAGGGTTCTGACCCCTCGCTTCCATCCCATAACCGCTGTCAATGAGCTCACACTGTGGTCA

**16432-2**

GATGGCATGGTCGTTGCTAATGTGCCTGCTGGATGGAGCACTTCCCTGTGAGGCCAGGGACCCGCC  
TGTCCCTGGAGCTGGGCAAGGAGGGAGAGTGATACCAGGAAGGTGGGCTGCAGCCAGGGGCCAGA  
GTCAGTTAGGGAGTGGCCTCGGCCCTCAAAGCTCCTCCGGGACTGCTCAGGAGTGATGGTGCCTGG  
AGTTTGCCCCACTTCCCTGGCCACCCCTGGAAGGTGCCTGGCTGCTCCAGGCCTCTAGGCTGGCTGATG  
GGTTCTCCAGGACACAAGTATCATTAAAGCCACCCCTCCTCAGCTGTGAGGCCAGATGTGGACAG  
GCTGTGCTCACACCCCTCGCCTGCCCTCCATCAGGAGGAGCCAGTGGAACCTCGGAAAGCTC  
CCAGCATCTCAGCAGCCCTCAAAGCTGCTGGGCAAGCTGGTCTCTGACTGGAGGTAC  
GCTTGGCCTGCTCTCGC

**17184.3**

TAAAAAAAGTGTAAACAAAGGTTATTAGACTTCTTCATGCCCGAGATCCAGGATGTCTATGAAACCGTTA  
TCTTACAAAGAAAGCACAATATTGGTATAACTAAAGTCAGTGACTGCTTAAC TGAAATAGCGTCCATCAA  
AAAGTGGGTTAAGGTAAACTACCTGACGATATTGGCGGGGATCCTGCAGTTGGACTGCTGCCGGTTT  
GTCCAGGGTTCCGGGTCTGTTCTGGCACTCATGGGGACAGGCATCCTGCTCGTGTGGGGCCCCGCTG  
GAGCCCTACGTGAAGCTGAAGGTATCGACCSTAGGGGCTCTAGGGCAGTGGACCTCATCCGGAACT  
AACAAAGGGTGGGGAGAGGCCTTGGCTATGTGGG

*Fig. 1Q*

**17184.4**

CAAGCGTCCCTTATGGATGTAAATTCAAACAGTCATGCTGAGCCATCCCAGGCTGACAGTCACGTTWAAG  
ACACTAGGTGGCGCCACAGTGCCACCCAAGGAGAAGAAGAATTGGAATTTCATGAAGATGTACGG  
AAATCTGATGTTGAATATGAAAATGGCCCCAAATGGAATTCCAAAGGTTACCACAGGGGCTGTAAGACCT  
AGTGACCCCTCTAAGTGGAAAGAGGAATGGAGAATAGTATTCTGATGCATCAAGAACATCAGAATATAAA  
ACTGAGATCATAATGAAGGAAATTCCATATCCAATATGAGTTACTCAGAGACAGTAGAAACTATTCCCAG  
G

**17185.1**

TAGGAATAACAAATGTTATTCAGAAATGGATAAGTAATACTACCCCTCATCTCTTAATGCCCTTCC  
TCTCCTCTGCACAGGAGACACAGATGGTAACATAGAGGCATGGGAAGTGGAGGAGGACACAGGACTAG  
CCCACCACTTCTCTTCCGGTCTCCCAAGATGACTGCTTATAGAGTGGAGGAGGCAAACAGGTCCCCCTCA  
ATGTACCAGATGGTCACCTATAGCACCAGCTCCAGATGGCCACGTGGTGCAGCTGGACTCAATGAAACTC  
TGTGACAACCAGAAGATACTGCTTGGATGAGAGGGAGGATAAAGCCATGCAGGGAGGATATTACCAT  
CCCTACCTAAGCACAGTGCAAGCAGTGAGCCCCGGCTCCAGTACCTGAAAAACCAAGGCCTACTGNC  
TTTGGATGCTCTTGGGCCACG

**17188.2**

AAGCCTCCTGCCCTGGAAATCTGGAGCCCCCTGGAGCTGAGCTGGACGGGGCAGGGAGGGCTGAGAGG  
CAAGACCGTCTCCCTCTGCTGCAGCTGCTTCCCCAGCAGCCACTGCTGGGCACAGCAGAAACGCCAGCA  
GAGAAAATGGAGCCGAGAGTCCTTAGCCCTGGAGCTGAGGCTGCCTCTGGCTGACCCGCTGGCTGTA  
CGTGGCCAGAACTGGGTTGGCATCTGGCATCCATTGAGGCCAGGGTGGAGGAAAGGGAGGCCAACAG  
AGGAAAACCTATTCCCTGCTGTGACAACACAGCCCTGTCCCACGCAGCCTAAGTGCAGGGAGCGTGTGAA  
GTCAGGCAGCCAGTCGGGGAGGACGAGGTAACTCAGCAGCAATGTCACCTGTAGCCTATGCGCTCAATG  
GCCCGGAGGGCAGCAACCCCCCGCACACGTCAAGCCAACAGCAGTGCCTCTGCAGGCACCAAGAGAGCG  
ATGATGGACTTGAGCGCCGTGTC

**17190.1**

GTTTGGCAGAAGACATGTTAATAACATTTCATATTAAAAAAACAGCAACAATTCTCTATCTGTCCACCAT  
CTTGCCTTGCCTCCTGGGGCTGAGGCAGACAAAGGAAGGTAATGAGGTTAGGGCCCCCAGGCGGGCT  
AAAGTGTATTGGCCTGCTCCTGCTCAAAGAGAGGCCATAGCCAGCTGGGCACGGCCCCCTAGCCCCTCCAG  
GTTGCTGAGGCAGCGGTGGTAGAGTTCTCACTGAGCCGTGGCTGCAGTCTCGCAGGGAGAAACTC  
TGCACCAGCCCTGGCTCACGGCCGAAAGAGGTGGAGCCCTGAGAACCGGAGGAAACATCCATCACCT  
CCAGCCCTCCAGGGCTTCCCTGGCCTGCCAGTTCACCTGCCAGCCGGCTGGGCCA  
GGTAGTCAGCGTTGAGAACAGCCCTCCGAGAACGCCTGCCGGTCAAATCTCCCGCTATAGGAGCCCC  
CCGGGAGGGGTAGCACC

*Fig. 1R*

**17190.2**

CAAGTTAACGTCAGGCTTGGCAGAGGTGGAGTAGATGAAAACAAAGGTGTATTATGAAGAGGATGTG  
AGTCCTTGGGTAGGAGAGAAAGGCTTGTGAGCTCTATTCAAGATACTTTACCTGTGCAAAAGCAC  
ATTTCCACCTCCTCTCATGGCATTGTAGGTAGTATGATTCTATTCCATCTGCATTAGAGGTGA  
AGAATAACGTACAAGGGATTAGTCAAGGGACCCCTCACTAAGTGTGATGGAGTTAGGACAGAG  
CTCAGCTGTTGAATCTCAGAGCCCAGGCAGCTGGAGCTGGTAGGATCCTGGAGCTGGCACTAATGTGA  
GGTGCATTCCCTCCAACCCAGGCTCAGATCCGGAACCTGACCGTGCTGACCCCCGAAGGGGAGGCAGGG  
CTGAGCTGGCCCGTGGCTCCCTGCTCCTTACACCACACTCTCGCTTGAGGTGCTGGCTGGACT  
ACTTCACAGAGCAGC

**17191.2&89.2**

TGGCCTGGGCAGGATTGGGAGAGAGGTAGCTACCCGGATGCAGTCCTTGGATGAAGACTATAGGGTAT  
GACCCCATCATTCCCCAGAGGTCTCGGCCTCCTTGGTGTTCAGCAGCTGCCCTGGAGGAGATCTGGC  
CTCTCTGTGATTTCATCACTGTGACACTCCTCTCCTGCCCTCCACGACAGGCTGCTGAATGACAACACCT  
TTGCCCAAGTCAAGAAGGGGGTGCAGTGTGGTGAAGTGTGCCGTGGAGGGATGTGGACGAAGGCGCCC  
TGCTCCGGGCCCTGCAGTCTGGCCAGTGTGCCGGGCTGCACTGGACGTGTTACGGAAGAGCCGCCAC  
GGGACCGGGCCTGGTGGACCATGAGAATGTATCAGCTGCCCCACCTGGTGCCAGCACCAAGGAGG  
CTCAGAGCCGCTGTGGGAGGAAATTGCTGTTAGTCAGTGGACATGGTAAGGGAAATCTCTCACGGG  
GGTTGTGAATGCCAGGCCCTT

*Fig. 1S*

**"REPLACEMENT SHEETS"**

AGCCAGATGGCTGAGAGCTGCAAGAAGAAGTCAGGATCATGATGGCTCAGTTCCCACAGCGATGAATGG  
AGGGCCAAATATGTGGCTATTACATCTGAAGAACGTACTAAGCATGATAAACAGTTGATAACCTCAAACC  
TTCAGGAGGTTACATAACAGGTGATCAAGCCGTACTTTTCTACAGTCAGGTCTGCCGGCCCCGGTTT  
AGCTGAAATATGGGCCTATCAGATCTGAACAAGGATGGGAAGATGGACCAGCAAGAGTTCTATAGCTA  
TGAAACTCATCAAGTTAAAGTTGCAGGGCAACAGCTGCCTGTAGTCCTCCCTATCATGAAACAACCCC  
CTATGTTCTCTCCACTAATCTCTGCTCGTTGGATGGGAAGCATGCCAATCTGTCCATTATCAGCCAT  
TGCCTCCAGTTGCACCTATAGCAACACCCCTGTCTGCTACTTCAGGGACCAGTATTCTCCCTTAATGA  
TGCCTGCTCCCTAGTGCCCTGTAGTACATCCTCATTACCAAATGGAACTGCCAGTCTCATTAGCCTT  
TATCCATTCCATTCTTCAACATTGCCATGCATCATCTTACAGCCTGATGATGGGAGGATTGGTGG  
TGCTAGTATCCAGAAGGCCAGTCTCTGATTGATTAGGATCTAGTAGCTCAACTCCTCAACTGCTCCCT  
CTCAGGGAACTCACCTAACAGACAGGGACCTCAGAGTGGCAGTCAGCCTCAAGATTAAAGTATCGGC  
AAAAATTAAAGTCTAGACAAAGGCATGAGCGGATACCTCTCAGGTTTCAAGCTAGAAATGCCCTCTC  
AGTCAAATCTCTCAAACCTAGCTACTATTGGACTCTGGCTGACATCGATGGTAGGGACAGCTGA  
AAGCTGAAGAATTATTCTGGCGATGCACCTCACTGACATGGCAAAGCTGGACAGCCACTACCACTGACG  
TTGCCTCCCGAGCTTGTCCCTCCATCTTCAGAGGGGAAAGCAAGTTGATTGTTAATGGAACTCTGCCT  
TCATATCAGAAAACACAAGAAGAAGAGCCTCAGAAGAAACTGCCAGTTACTTTGAGGACAAACGGAAAGC  
CAACTATGAACGAGGAAACATGGAGCTGGAGAAGCAGCAGGCCAAGTGGTAGGGAGCAGCAGAGGGGA  
GGCTGAACGCAAAGGCCAGAAAGAGAAGGAAGAGTGGAGCAGGAAACAGAGAGACTGCAAGAGCAAGA  
ATGGAAGAAGCAGCTGGAGTTGGAGAACGCTTGGAGAAACAGAGAGAGCTGGAGAGACAGCGGGAGGA  
AGAGAGGAGAAAGGAGATAGAAAGACGAGAGGGCAGCAAAACAGGAGCTTGAGAGACAACGCCGTTAGAA  
TGGGAAAGACTCCGTCGGCAGGAGCTGCTCAGTCAGAAGACCAGGGAAACAAGAAGACATTGTCAGGCTGA  
GCTCCAGAAAAGAAAAGTCTCCACCTGGAACCTGGAAGCAGTGAATGGAAAACATCAGCAGATCTCAGGCTGA  
CTACAAGATGTCCAATCAGAAAGCAAACACAAAAGACTGAGCTAGAAGTTGGATAAACAGTGTGACCTG  
GAAATTATGGAAATCAAACAACTTCAACAAAGAGCTTAAGGAATATCAAATAAGCTTATCTATCTGGTCCCTG  
AGAAGCAGCTATTAAACGAAAGAATTAAAACATGCAGCTCAGTAACACACCTGATTCAAGGATCAGTTAC  
TTCATAAAAAGTCATCAGAAAAGGAAGAATTATGCCAAAGACTTAAAGAACAAATTAGATGCTCTGAAAAAGA  
AACTGCATCTAAGCTCTAGAAATGGATTCTTAACAATCAGCTGAAGGAACAGAGAAAGCTATAATAC  
ACAGCAGTTAGCCCTGAAACAACCTCATAAAATCAAACGTGACAAATTGAAGGAAATCGAAAGAAAAAGATT  
AGAGCAAAAAAAAAAAAAA

*Fig. 2A*

Serial No. 09/827,271 Docket No. 210121.462C6

Inventor(s): Jennifer L. Mitcham et al.

Express Mail No. EV719392064US

**"REPLACEMENT SHEETS"**

ATGGCAGTGACATTACCATCATGGAACCCACCTTCCCTTCAGGATTCTGTAGTGGAAAGAGAGCA  
CCCAGTGTGGGCTGAAAACATCTGAAAGTAGGGAGAAGAACCTAAAATAATCAGTATCTCAGAGGGCTCT  
AAGGTGCCAAGAAGTCTCACTGGACATTTAAGTGCCAACAAAGGCATACTTCGGAATGCCAAGTCAAAA  
CTTTCTAACTTCTGTCTCTCAGAGACAAGTGAGACTCAAGAGTCTACTGCTTAGTGGCAACTACAGAAA  
ACTGGTGTACCCAGAAAAACAGGGAGCAATTAGAAATGGTCCAATATTCAAAGCTCCGCAAACAGGATGT  
GCTTCCCTTGCCCATTAGGGTTCTCTTCTTCTTTATTAACCACTA

*Fig. 2B*

**"REPLACEMENT SHEETS"**

ATATCTAGAAGTCTGGAGTGAGCAAACAAGAGCAAGAAACAAAAAGAACGCAAGCAGAAGGCTCCAATA  
TGAACAAGATAAAATCTATCTCAAAGACATATTAGAAGTTGGGAAAATAATTATGTGAACTAGACAAGTGTG  
TTAAGAGTGATAAGTAAAATGCACGTGGAGACAAGTGCATCCCCAGATCTAGGGACCTCCCCCTGCCTGT  
CACCTGGGGAGTGAGAGGACAGGGATAGTCATGTTCTTGTCTGAATTAGTTATATGTGCTGTAATG  
TTGCTCTGAGGAAGCCCCTGGAAAGTCTATCCAACATATCCACATCTTATATTCCACAAATTAAAGCTGTAG  
TATGTACCCCTAACGCGCTGCTAATTGACTGCCACTCGCAACTCAGGGCGGCTGCATTAGTAATGGGT  
CAAATGATTCACTTTTATGATGCTCCAAAGGTGCCTGGCTCTTCCAACTGACAAATGCCAAAGTTG  
AGAAAAATGATCATAATTAGCATAAACAGAGCAGTCGGCGACACCGATTAAATAAAACTGAGCACCTT  
CTTTTAAACAAACAAATGCCGGTTTATTCTCAGATGATGTTCATCCGTGAATGGTCCAGGGAAAGGACCTT  
TCACCTGACTATATGGCATTATGTCATCACAAGCTCTGAGGCTCTCCTTCCATCCTGCGTGGACAGCTA  
AGACCTCAGTTCAATAGCATCTAGAGCAGTGGACTCAGCTGGGTGATTGCCCCCATCTCCGGGG  
GAATGTCTGAAGACAATTGTTACCTCAATGAGGGAGTGGAGGAGGATACAGTGCTACTACCAACTAGTG  
GATAAAGGCCAGGGATGCTGCTAACCTCCTACCATGTACAGGACGTCTCCCATTACAACATACCCAAATCC  
GAAGTGCAACTGTGTCAAGGACTAAGAAACCCCTGGTTTGAGTAGAAAAGGGCCTGGAAAGAGGGAGCC  
AACAAATCTGTCTGCTCCTCACATTAGTCATTGGCAAATAAGCATTCTGTCTTTGGCTGCTGCCTCAGC  
ACAGAGAGCCAGAACTCTATCGGGCACCAGGATAACATCTCAGTGAACAGAGTTGACAAGGCCTATGGG  
AAATGCCTGATGGGATTATCTTCAGCTTGTGAGCTTAAGTTCTTCCCTCATTCTACCCCTGCAAGCCA  
AGTTCTGTAAGAGAAATGCCGTAGTTCTAGCTCAGGTTCTACTCTGAATTAGATCTCCAGACCCCTCCT  
GGCCACAATTCAAATTAGGCAACAAACATATACCTTCCATGAAGCACACACAGACTTTGAAAGCAAGGAC  
AATGACTGCTGTAATTGAGGCCTTGAGGAATGAAGCTTGAAGGAAAAGAAATCTTGTGTTCAAGCCCCCTT  
CCCACACTCTCATGTGTTAACCACTGCCTCCTGGACCTGGAGCCACGGTGAUTGTATTACATGTTGTTA  
TAGAAAATGATTAGAGTTCTGATCGTTCAAGAGAATGATTAAATACATTCTA

*Fig. 2C*

Element Display		Probe1	Probe2	GEM/Element	Plate/Well	Probe3	S/B	A%	Probe2	S/B	A%	Probe1
Diff Exp	Sample	Exp	Exp	Exp	Exp	Exp	Exp	Exp	Exp	Exp	Exp	Exp
+1.7	364A Ovary T (mets)	272A Dendritic cells	42240608 (420)	42100198 (C:11)	2393	13.7	50	1430	2.0	50		
-1.1	335A Ovary T	S7 Ovary N	42220626 (420)	42100198 (C:11)	355	2.7	54	382	1.8	54		
+1.8	261A Ovary T	S10 Skeletal muscle N	42230621 (420)	42100196 (C:11)	1238	6.9	51	707	1.9	51		
+8.1	264A Ovary T	S2 Pancreas N	422ND629 (420)	42100196 (C:11)	9590	44.0	62	1190	2.3	62		
-1.2	386A Ovary T	S40 PBMC (activated)	422J0605 (420)	42100198 (C:11)	516	3.8	50	618	2.0	50		
+4.7	265A Ovary T	C15 Heart N	42200624 (420)	42100196 (C:11)	2305	14.8	53	489	2.2	53		
-1.4	S25 Ovary T	C14 Bone Marrow N	422HD619 (420)	42100196 (C:11)	531	3.5	53	743	2.0	53		
	383A Ovary T (mets)	I1 Colon N	422B0609 (420)	42100196 (C:11)	1842	10.6	39	671	2.0	39		
-1.9	S22 Ovary T	C79 Kidney N	42290627 (420)	42100196 (C:11)	453	3.3	66	657	3.2	66		
+3.2	9485 OT 1-P (SCID)	9485 OT 5-P (SCID)	422Y0602 (420)	42100196 (C:11)	1882	12.1	57	594	2.3	57		
+1.5	262A Ovary T	334A Large intestine N	422A0622 (420)	42100196 (C:11)	1486	7.5	55	985	2.2	55		
-1.1	S115 Ovary T (mets)	C110 Small intestine N	422C0604 (420)	42100196 (C:11)	509	3.4	51	573	2.0	51		
+1.1	288A Ovary T	C712 Lung N	422V0625 (420)	42100196 (C:11)	700	4.5	54	651	2.1	54		
-2.1	201A Ovary T	S8 Stomach N	422W0620 (420)	42100196 (C:11)	625	4.6	46	1335	3.6	46		
+7.8	S23 Ovary T	S36 Spinal cord N	422G0628 (420)	42100196 (C:11)	3896	22.7	50	502	2.2	50		
+1.8	205A Ovary T	270A Liver N	422Q0606 (420)	42100196 (C:11)	2251	14.7	46	1256	2.0	46		
-1.9	9334 Ovary T (SCID)	I2 Skin N	422R0601 (420)	42100196 (C:11)	552	3.4	72	1029	2.3	72		
+5.6	385A Ovary T	S91 Fetal tissue	422X0607 (420)	42100196 (C:11)	8126	35.6	50	1449	2.0	50		
-3.5	263A Ovary T	S73 Breast N	422H0623 (420)	42100196 (C:11)	439	3.2	61	1531	3.4	61		
-3.3	382A Ovary T	CT19 Brain N	422Q0610 (420)	42100196 (C:11)	387	3.2	50	1278	2.1	50		
+4.8	266A Ovary T	S27 Ovary N	42250603 (420)	42100196 (C:11)	4242	22.7	58	883	2.0	58		

Fig. 3

Serial No. 09/827,271 Docket No. 210121.462C6

Inventor(s): Jennifer L. Mitcham et al.  
Express Mail No. EV719392064US  
**"REPLACEMENT SHEETS"**

TCGAGCGGCCGCCCCGGCAGGTCTTCAGACTGGACTGTGTACACTGCCAGGCTCCAGGGCTCCAAC  
TTGCAGACGGCCTGTTGGGACAGTCTCTGTAATCGCGAAAGCAACCATGGAAGACCTGGGGAAAACA  
CCATGGTTTATCCACCCCTGAGATCTTGAAACAACCTCATCTCTCAGCGTGGAGGGAGGCTCTGGACTG  
GATATTCTACCTCGGCCGCGACCGCT

*Fig. 4*

Serial No. 09/827,271 Docket No. 210121.462C6

Inventor(s): Jennifer L. Mitcham et al.

Express Mail No. EV719392064US

**"REPLACEMENT SHEETS"**

TAGCGYGGTCGCGGCCGAGGYCTGCTTYCTGTCCAGCCCAGGGCCTGTGGGTCAAGGGCGGTGGGTGC  
AGATGGCATCCACTCCGGTGGCTCCCCATCTTCTCTGGCCTGAGCAAGGTCAAGCCTGCAGCCAGAGTA  
CAGAGGGCCAACACTGGTGTTCTGAACAAGGGCCTAGCAGGCCCTGAAGGRCCCTCTGTAGTGTG  
AACTTCCTGGAGCCAGGCCACATGTTCTCCTCATACCGCAGGYTAGYGATGGTGAAGTTGAGGGTCAAATA  
GTATTMANGRAGATGGCTGGCARACCTGCCCGGGCGCTCSAAATCC

*Fig. 5*

Serial No. 09/827,271 Docket No. 210121.462C6

Inventor(s): Jennifer L. Mitcham et al.

Express Mail No. EV719392064US

**"REPLACEMENT SHEETS"**

AGCGTGGTCGCGGCCGAGGTGTCCTCAGGGCTGCTTATGCCCTGTTCAAGAACACCAGTGTAGCTCT  
CTGTACTCTGGTTGCAGACTGACCTGCTCAGGCCTGAGAAGGATGGGGCAGCCACCAGAGTGGATGCTG  
TCTGCACCCATCGTCCTGACCCCCAAAAGCCCTGGACTGGACAGAGAGCGGCTGTACTGGAAGCTGAGCCA  
GCTGACCCACGGCATCACTGAGCTGGGCCCCTACACCCTGGACAGGGACAGTCTCTATGTCAATGGTTTC  
ACCCATCGGAGCTGTACCCACCACAGCACCGGGTGGTCAGCGAGGAGCCATTCAACCTGCCCGGG  
CGGCCGCTCGA

*Fig. 6*

**Fig. 7A**

TTGGGGNTTMGAGCGGCCGCCGGCAGGTACCGGGTGGTCAGCGAGGAGCCATTACACTGAACCT  
CACCATCAACAAACCTGCAGGTATGAGGAGAACATGCAGCACCCCTGGCTCCAGGAAGTTAACACACCACGGAG  
AGGGTCCTTCAGGGCCTGCTCAGGTCCCTGTTCAAGAGCACCAGTGTGGCCCTCTGTACTCTGGCTGCA  
GAAGTGAAGTTGCTCAGACTTGAGAACATGGGCAGCCACTGGAGTGGACGCCATCTGCACCCCTCCGCCT  
TGATCCCAGTGGCCTGGACTGGACAGAGAGCGGCTATACTGGGAGCTGAGCCAGTCCTCTGGCGGNGAC  
NCCNCTT

**Fig. 7B**

AGCGTGGTCGCAGGCCAGGTCCAGTCGCAGCATGCTCTTCTCCTGCCACTGGCACAGTGAGGAAGATC  
TCTGCTGTCAGTGAGAAGGCTGTCATCCACTGAGATGGCAGTCAAAGTGCATTAAATACACCTAACGTATC  
GAACATCATAGCTTGGCCCAGGTTATCTCATATGTGCTCAGAACACTTACAATAGCCTGCAGACCTGCCCG  
GGCGGCCGCTCGA

*Fig. 7A and 7B*

Serial No. 09/827,271 Docket No. 210121.462C6

Inventor(s): Jennifer L. Mitcham et al.

Express Mail No. EV719392064US

**"REPLACEMENT SHEETS"**

TGTGGTGTGAACTCCTGGAGNCAGGGTACCCATGTCCCTCCCCATACTGCAGGTTGGTATGGTGAAGT  
TGAGGGTGAATGGTACCAAGGAGAGGGCCAGCAGCCATAATTGTSGRGCKGSMGMSSGAGGMWGGWGTY  
YCWGAGGTTCYRARRTCCACTGTGGAGGTCCCAGGAGTGCTGGTGGTGGCACAGAGSTCYGATGGGTG  
AAACCATTGACATAGAGACTGTTCCGTCCAGGGTAGGGGCCAGCTCTYRATGYCATTGGYCAGTTK  
GCTYAGCTCCCAGTACAGCCRCTCTCKGYYGMGWCCAGSGCTTTGGGTCAAGATGATGGATGCAGATG  
GCATCCACTCCAGTGGCTGCTCCATCCTCTCGGACCTGAGAGAGGTCAGTCTGCAGCCAGAGTACAGAG  
GGCCAACACTGGTGTCTTGAATA

*Fig. 8*

Serial No. 09/827,271 Docket No. 210121.462C6

Inventor(s): Jennifer L. Mitcham et al.

Express Mail No. EV719392064US

**"REPLACEMENT SHEETS"**

TCGAGCGGCCGCCCCGGGCAGGTCAAGAACATGGTCTTAGAGCCACTGCCTCCTGGATTCCACCTGT  
GCTGCGGACATCTCCAGGGAGTGCAGAAGGGAAAGCAGGTCAAACGTGCTCAGATCAGTCAGACTGGCTGTT  
CTCAGTTCTCACCTGAGCAAGGTCACTGCAGCCAGAGTACAGAGGGCCAACACTGGTGTCTGAACAA  
GGGCTTGAGCAGACCCTGCAGAACCCCTTCCGTGGTGAACCTCCTGGAAACCAGGGTGTGCATGTT  
TTCCCTCATATAATGCAAGGTTGGTGTGG

***Fig. 9***

Gene Name	Sample Name	Probe 1 Exp Name	P1	P2 Name	P2 ID	GEM ID	Probe 1 Value	Probe 2 Value	S/B	A%	Probe 1 S/B	Probe 2 S/B	A%
											Probe 1	Probe 2	
42100188 (D3)		+7.0 205A Ovary T		270A Liver N		422Q0606	8620	1240	57.7	65	2.2	65	
42100188 (D3)		+5.9 S23 Ovary T		S56 Spinal Cord N		422C0628	5894	1002	35.3	89	3.9	89	
42100188 (D3)		+5.7 385A Ovary T		S91 Fetal tissue		422X0607	12151	2121	54.3	73	2.8	73	
42100188 (D3)		+5.1 426A Ovary T (met)		415A Adora N		422X0611	7487	1480	53.0	73	9.7	73	
42100188 (D3)		+3.5 263A Ovary T		S73 Breast N		422H0623	7302	2116	39.2	84	4.5	84	
42100188 (D3)		+3.3 383A Ovary T (met)		11 Colon N		422B0609	3714	1113	20.4	83	2.6	83	
42100188 (D3)		+3.0 933A Ovary T (met)		12 Skin N		422R0601	2435	814	12.1	75	2.1	75	
42100188 (D3)		+2.6 384A Ovary T (met)		272A Dendritic cell		42240608	4578	1754	25.0	69	2.3	69	
42100188 (D3)		+2.2 264A Ovary T		S2 Pancreas N		422N0629	7904	3596	38.5	81	5.6	81	
42100188 (D3)		+2.0 386A Ovary T		S40 PBMC (activa		422J0605	2191	1081	14.0	90	2.9	90	
42100188 (D3)		+2.0 S115 Ovary T (met)		CT10 Small intestine		422C0604	1979	971	10.4	80	2.7	80	
42100188 (D3)		+2.0 265A Ovary T		CT5 Heart N		42200624	1911	964	13.9	93	3.4	93	
42100188 (D3)		+2.0 335A Ovary T		S7 Ovary N		42220626	1666	817	9.8	100	3.0	100	
42100188 (D3)		+1.9 428A Ovary T (met)		243A Esophagus N		42240612	1827	3480	13.4	97	9.5	97	
42100188 (D3)		+1.6 261A Ovary T		S10 Skeletal muscle		42230621	5914	3653	30.4	86	6.0	86	
42100188 (D3)		+1.6 266A Ovary T		S27 Ovary N		42250603	2039	1274	11.9	50	2.6	50	
42100188 (D3)		+1.6 S22 Ovary T		CT9 Kidney N		42290627	1736	1072	11.0	92	4.0	92	
42100188 (D3)		+1.4 9485 OT I-P (SCID)		9485 OT-SP (SCL)		422Y0602	4204	3074	23.0	93	7.7	93	
42100188 (D3)		+1.4 262A Ovary T		334A Large Intest		422Z0622	3002	2101	16.6	89	4.0	89	
42100188 (D3)		+1.3 S25 Ovary T		CT4 Bone Marrow		422H0619	1643	1297	9.6	90	3.1	90	
42100188 (D3)		+1.2 429A Ovary T (met)		364A Ovary N		422I0614	2521	2084	22.0	65	23.9	65	
42100188 (D3)		+1.2 382A Ovary T		C119 Brain N		422Q0610	2072	1663	10.9	88	2.3	88	
42100188 (D3)		+1.2 288A Ovary T		CT12 Lung N		422V0625	1840	1473	10.7	87	3.8	87	
42100188 (D3)		+1.1 201A Ovary T		S6 Stomach N		422W0620	1329	1204	9.1	90	3.5	90	

Fig. 10

Gene Name	Bal	Probe 1 Exp. Name	P1	P2 Name	Probe 2	ID	Gene ID	Probe 1 value	Probe 2 value	Probe 1		Probe 2	
										A%	S/B	A%	S/B
42 B0 81 {C3	+18.3	385A Ovary T		S91 Fetal tissue	422X0607	26711	1424	103.3	54	20	54		
42 B0 81 {C3	+11.5	S23 Ovary T		S56 Spinal Cord N	422G0628	13559	1179	65.3	68	3.9	68		
42 B0 81 {C3	+11.1	426A Ovary T (mets)		415A Ovaria N	422X0611	14125	1273	67.3	61	5.6	61		
42 B0 81 {C3	+10.8	205A Ovary T		270A Liver N	422Q0606	16121	1488	93.1	43	2.3	43		
42 B0 81 {C3	+5.1	263A Ovary T		S73 Breast N	422H0623	11326	2235	58.2	68	4.4	68		
42 B0 81 {C3	+4.6	384A Ovary T (mets)		272A Dendrite cells	42240608	6583	1424	24.5	40	2.1	40		
42 B0 81 {C3	+4.4	264A Ovary T		S2 Pancreas N	422N0629	9865	2245	40.9	64	3.6	64		
42 B0 81 {C3	+4.4	429A Ovary T (mets)		364A Ovary N	422D0614	2803	638	22.6	60	7.4	60		
42 B0 81 {C3	+4.2	261A Ovary T		S10 Skeletal muscle M	42230621	8271	1949	39.5	68	3.6	68		
42 B0 81 {C3	+3.8	S115 Ovary T (mets)		CT10 Small intestine N	422CM0604	2281	607	11.6	60	2.1	60		
42 B0 81 {C3	+2.5	265A Ovary T		CT5 Heart N	422D0624	3192	1293	19.2	68	4.0	68		
42 B0 81 {C3	-2.3	S22 Ovary T		CT9 Kidney N	42290627	565	1276	3.6	70	3.9	70		
42 B0 81 {C3	+2.2	266A Ovary T		S27 Ovary N	42250603	2774	1260	14.3	46	2.7	46		
42 B0 81 {C3	+2.1	9334 Ovary T (SCID)		12 Skin N	422R0601	1774	837	8.4	56	2.1	56		
42 B0 81 {C3	+1.9	9485 OT 1-P (SCID)		9485 OT 3-P (SCID)	422Y0602	6967	3726	41.5	70	9.2	70		
42 B0 81 {C3	+1.6	382A Ovary T		CT19 Brain N	422Q0610	2313	1471	6.2	50	1.9	50		
42 B0 81 {C3	+1.6	288A Ovary T		CT12 Lung N	422V0625	1657	1054	9.7	69	2.9	69		
42 B0 81 {C3	-1.5	S25 Ovary T		CT4 Bone Marrow N	422H0619	848	1243	4.5	65	2.7	65		
42 B0 81 {C3	+1.4	262A Ovary T		334A Large Intestine	422A0622	3171	2214	16.8	69	3.8	69		
42 B0 81 {C3	+1.2	386A Ovary T		S40 PBMC (activated)	42210605	630	544	4.2	53	1.9	53		
42 B0 81 {C3	-1.2	335A Ovary T		S7 Ovary N	42220626	592	730	3.7	75	2.6	75		
42 B0 81 {C3	-1.0	201A Ovary T		S6 Stomach N	422W0620	1197	1237	7.8	65	3.5	65		
42 B0 81 {C3	-1.0	428A Ovary T (mets)		243A Esophagus N	42240612	783	797	4.5	95	2.4	95		
42 B0 81 {C3	383A Ovary T (mets)			11 Colon N	422B0609	3470	862	8.9	24	1.7	24		

Fig. 11

Gene Name	Exp. Name	P1	P2	Name	Probe 1 ID	GEM Value	Probe 2 ID	GEM Value	Probe 1		Probe 2	
									A%	S/B	A%	S/B
4210182 (H7)	+16.7 426A Ovary T (met)			415A Ovary N	422X0611	7706	462	46.3	75	3.5	75	
4210182 (H7)	+10.7 205A Ovary T			270A Liver N	422Q0606	10171	950	61.2	41	1.8	41	
4210182 (H7)	+9.9 385A Ovary T			S91 Fetal tissue	422X0607	14415	1459	62.1	48	2.2	48	
4210182 (H7)	+8.8 523 Ovary T			S56 Spinal Cord N	422GH628	7781	880	47.3	73	3.4	73	
4210182 (H7)	+6.4 383A Ovary T (met)			I. Colon N	422B0609	4807	748	27.6	47	2.2	47	
4210182 (H7)	+5.1 263A Ovary T			S73 Breast N	422H0623	9815	1909	57.1	74	4.2	74	
4210182 (H7)	+4.9 429A Ovary T (met)			364A Ovary N	422U0614	2661	543	20.3	61	6.7	61	
4210182 (H7)	+3.5 264A Ovary T			S2 Pancreas N	422N0629	7934	2274	38.8	71	3.9	71	
4210182 (H7)	-2.9 S25 Ovary T			CT4 Bone Marrow	422U0619	480	1375	3.5	80	3.0	80	
4210182 (H7)	+2.8 261A Ovary T			S10 Skeletal muscle	422Z0621	8993	3245	34.6	69	5.1	69	
4210182 (H7)	+2.5 S115 Ovary T (met)			CT10 Small intestine	422C0604	1864	738	8.1	67	2.2	67	
4210182 (H7)	+2.3 9334-Ovary T (SCL)			12 Skin N	422R0601	2552	1113	12.7	41	2.6	41	
4210182 (H7)	-2.3 S22 Ovary T			CT9 Kidney N	422B0627	386	889	3.2	69	3.4	69	
4210182 (H7)	+2.2 384A Ovary T (met)			272A Dendritic cell	422Z0608	3516	1567	18.7	55	2.2	55	
4210182 (H7)	-2.2 382A Ovary T			CT19 Brain N	422Q0610	608	1320	4.2	60	2.3	60	
4210182 (H7)	+1.9 265A Ovary T			CT5 Heart N	422B0624	2063	1080	13.6	87	3.5	87	
4210182 (H7)	+1.8 266A Ovary T			S27 Ovary N	422S0603	1550	847	7.0	58	2.1	58	
4210182 (H7)	+1.5 262A Ovary T			334A Large intestine	422A0622	2559	1651	13.2	73	3.2	73	
4210182 (H7)	+1.4 386A Ovary T			S40 iPBM (activa)	422J0605	534	738	3.9	62	2.2	62	
4210182 (H7)	-1.3 288A Ovary T			CT12 Lung N	422V0625	893	1120	5.3	66	3.1	66	
4210182 (H7)	-1.3 335A Ovary T			S7 Ovary N	4222B0626	440	567	3.3	60	2.2	60	
4210182 (H7)	+1.2 9485 OT 1-P (SCID)			9485 OT 1-P (SCID)	422U0602	4188	3529	21.6	66	9.5	66	
4210182 (H7)	+1.1 428A Ovary T (met)			243A Esophagus N	422A0612	725	689	6.2	65	2.8	65	
4210182 (H7)	-1.0 201A Ovary T			S6 Stomach N	422W0620	1008	1018	7.4	62	3.2	62	

Fig. 12

Gene Name	Batch	Probe 1	P1	Probe 2	P2	Gene ID	Value	Probe 1	P1	Probe 2	P2	S/B	A%	Probe 1	P1	Probe 2	P2	S/B	A%
421V0189 (D1)		+33.2	426A Ovary T (mets)		415A Aorta N	4222X0611	8072	+24.3	55.2	67	2.4	67							
421V0189 (D1)		+13.7	S23 Ovary T		S56 Spinal Cord N	422G0628	7367	-53.7	42.6	69	2.5	69							
421V0189 (D1)		+12.6	429A Ovary T (mets)		364A Ovary N	42210614	2850	-22.7	21.7	64	3.5	64							
421V0189 (D1)		+8.0	385A Ovary T		S91 Fetal tissue	4222X0607	1171	-146.9	54.0	58	2.2	58							
421V0189 (D1)		+7.3	263A Ovary T		S73 Breast N	422H0623	6949	-95.2	37.8	69	2.6	69							
421V0189 (D1)		-5.8	S25 Ovary T		CT4 Bone Marrow	422H0619	208	-121.0	2.1	44	2.9	44							
421V0189 (D1)		+5.0	205A Ovary T		270A Liver N	422Q0606	8676	-173.7	52.3	57	2.6	57							
421V0189 (D1)		+4.5	383A Ovary T (mets)		11 Colon N	422B0609	3149	-70.7	17.4	57	2.0	57							
421V0189 (D1)		+4.4	261A Ovary T		S10 Skeletal muscle	42230621	6332	-144.3	29.1	77	2.9	77							
421V0189 (D1)		+4.2	264A Ovary T		S2 Pancreas N	422N0629	7612	-180.9	38.1	79	3.3	79							
421V0189 (D1)		-3.2	382A Ovary T		CT19 Brain N	422Q0610	468	-150.8	3.4	60	2.3	60							
421V0189 (D1)		+2.9	9334 Ovary T (SCT)		12 Skin N	422R0601	2500	-86.0	12.3	51	2.1	51							
421V0189 (D1)		+2.5	S115 Ovary T (mets)		CT10 Small intestine	422C0604	1424	-56.9	6.7	61	2.1	61							
421V0189 (D1)		+2.4	265A Ovary T		CT5 Heart N	422D0624	1742	-72.3	11.8	70	2.8	70							
421V0189 (D1)		+2.3	384A Ovary T (mets)		272A Dendritic cell	42240608	3083	-134.2	17.0	62	2.0	62							
421V0189 (D1)		+1.9	266A Ovary T		S27 Ovary N	42250603	1370	-73.2	8.0	47	2.0	47							
421V0189 (D1)		-1.9	386A Ovary T		S40 PBMC (active)	42210605	307	-58.0	2.6	41	2.0	41							
421V0189 (D1)		+1.7	262A Ovary T		334A Large Intestine	422A0622	2097	-120.2	11.2	86	2.7	86							
421V0189 (D1)		-1.3	335A Ovary T		S7 Ovary N	42220626	373	-47.0	2.9	47	2.0	47							
421V0189 (D1)		-1.1	288A Ovary T		CT12 Lung N	422Y0625	969	-109.4	5.6	72	2.9	72							
421V0189 (D1)		+1.1	201A Ovary T		S6 Stomach N	422W0620	750	-67.2	5.6	62	2.4	62							
421V0189 (D1)		+1.1	428A Ovary T (mets)		243A Esophagus N	42240612	498	-44.6	4.2	73	2.1	73							
421V0189 (D1)		-1.0	9485-01 I-P (SCID)		9485 OT 5-P (SCID)	422Y0602	3117	-317.4	16.7	91	8.2	91							
421V0189 (D1)			S22 Ovary T		C19 Kidney N	42290627	224	-40.9	2.3	48	2.3	48							

Fig. 13

Gene Name	Exp Name	Bal Probe 1	P1	P2	Probe 2 Name	GEM ID	Probe1 Value	Probe2 Value	Probe1 S/B	Probe2 S/B	Probe1 A%	Probe2 A%
421H0187 (E1)	+20.2 426A Ovary T (met)				415A Aorta N	4222X0611	544	270	36.3	50	2.3	50
421H0187 (E1)	+10.0 S23 Ovary T				S36 Spinal Cord N	4222G0628	531	533	27.1	56	2.3	56
421H0187 (E1)	+8.3 429A Ovary T (met)				364A Ovary N	42210614	1252	150	10.1	58	2.5	58
421H0187 (E1)	+5.7 385A Ovary T				S91 Fetal tissue	4222X0607	9507	1668	35.8	45	2.1	45
421H0187 (E1)	+4.4 205A Ovary T				270A Liver N	422Q0606	5456	1235	31.1	50	2.0	50
421H0187 (E1)	+4.2 265A Ovary T				G75 Heart N	42200624	1834	438	11.9	48	2.0	48
421H0187 (E1)	-4.1 382A Ovary T				CT19 Brain N	422Q0610	309	1259	2.6	48	2.0	48
421H0187 (E1)	+3.6 261A Ovary T				S10 Skeletal muscle	4222J0621	3733	1036	17.7	55	2.3	55
421H0187 (E1)	+3.4 263A Ovary T				S73 Breast N	422H0623	4163	1239	23.0	62	3.0	62
421H0187 (E1)	+2.5 S115 Ovary T (met)				CT10 Small intestine	4222C0604	1565	627	8.8	47	2.1	47
421H0187 (E1)	+2.1 264A Ovary T				S2 Pancreas N	422N0629	3455	1630	14.9	60	3.0	60
421H0187 (E1)	+2.1 384A Ovary T (met)				272A Dendritic cells	42240608	2667	1270	13.4	44	1.9	44
421H0187 (E1)	-2.1 S22 Ovary T				CT9 Kidney N	42290627	291	605	2.4	51	2.5	51
421H0187 (E1)	-1.7 366A Ovary T				S40 PBMC (activatd)	42220605	410	687	3.2	47	2.0	47
421H0187 (E1)	+1.6 9334 Ovary T (SCID)				I2 Skin N	422R0601	1622	984	7.9	44	2.2	44
421H0187 (E1)	+1.5 262A Ovary T				334A Large intestine	422A0622	1892	1245	10.1	50	2.6	50
421H0187 (E1)	-1.5 288A Ovary T				CT12 Lung N	422Y0625	604	908	4.1	62	2.6	62
421H0187 (E1)	-1.4 428A Ovary T (met)				243A Esophagus	N42240612	236	325	2.7	78	1.9	78
421H0187 (E1)	-1.3 335A Ovary T				S7 Ovary N	42220626	382	501	2.9	58	2.0	58
421H0187 (E1)	-1.2 201A Ovary T				S6 Stomach N	422W0620	558	677	4.2	58	2.3	58
421H0187 (E1)	+1.0 9485 OT 1-P (SCID)				9485 OT 5-P (SCID)	422Y0602	2582	2493	15.1	57	6.3	57
421H0187 (E1)	383A Ovary T (met)				J1 Colon N	422B0609	2261	562	12.5	38	1.7	38
421H0187 (E1)	266A Ovary T				S27 Ovary N	42250603	1739	965	9.7	36	2.2	36
421H0187 (E1)	S25 Ovary T				CT4 Bone Marrow	422H0619	283	845	2.2	44	2.2	44

Fig. 14

**11721-1**

ACGGTTCAATGGACACTTTATTGTTACTTAATGGATCATCAATTGTCTCACTACCTACAAATGGAATT  
CATCTTGTTCATGCTGAGTAGTGAAACAGTGACAAAGCTAATCATAATAACCTACATCAAAGAGAACTAA  
GCTAACACTGCTCACTTCTTTAACAGGCAAATATAATATGCAGTCACTCTGACATGGTTAGT  
CACTAAAAAATTCAAATGGGATCTGAGAATGTATGCAAATCCAGGGTGCAGTGAAAGATGAGCTGAGATG  
CTGTGCAACTGTTAAGGGTCTGGCACTGCATCTTGGCCACTAGCTGAATCTTGACATGGAAGGTTT  
AGCTAATGCCAAGTGGAGATGCAGAAAATGCTAAGTTGACTTAGGGGCTGTGCACAGGAACAAAAGGCAG  
GAAAGTACTAAATATTGCTGAGAGCATCCACCCCCAGGAAGGACTTACCTCCAGGAGCTCCAAACTGGCA  
CCACCCCCAGTGCTCACATGGCTGACTTATCCTCCGTTCATTGGCACAGCAAGTGGCAGTG

**11721-2**

AAGGCTGGTGGTTTGATCCTGCTGGAGAACCTCCGCTTCATGTGGAGGAAGAAGGGAAGGGAAAAG  
ATGCTTCTGGAAACAAGGTTAAAGCCGAGCCAGCCAAAATAGAACGCTTCCGAGCTTCACTTCCAAGCTA  
GGGGATGTCTATGCAATGATGCTTGGCACTGCTCACAGAGCCCACAGCTCCATGGTAGGAGTCATCT  
GCCACAGAAGGCTGGTGGTTTGATGAAGAAGGAGCTGAACACTTTGCAAAGGCCTGGAGAGCCCA  
GAGCGACCCTCCTGGCCATCCTGGCGGAGCTAAAGTGCAGACAAGATCCAGCTCATCAATAATATGCT  
GGACAAAGTCATGAGATGATTATTGGTGGATGGCTTACCTCCTTAAGGTGCTCAACAACATGGA  
GATTGGCACTTCTGTGTTGATGAAGAGGGAGCCAAGATTGCTAAAGACCTAATGTCACAGCTGAGAAGA  
ATGGTGTGAAGATTACCTGCCTGTTGACTTGTCACTGCTGACAAGTTGATGA

**11724-1**

TTTGTTCCTTACATTTCTAAAGAGTTACTAAATCAGTCAACTGGCTTGAGACTCTTAAGTTCTGATTCC  
AACTTAGCTAATTCTGAGAACTGTGGTATAGGTGGCGTGTCTCTCTAGCTGGACAAAGTTCTTG  
TTTCCCCCTGTAGAGTATCACAGACCTCTGCTGAAGCTGGACCTCTGTCTGGCCTGGACTCCAAAT  
CTGCTTGTCAAGCCTGGAAATGTTAATCTTAAATTCTCCATATGGATGGACATCTGCTAAGTTGA  
TCCTTAAACACTGCAATTATCTCTTGAGTCTAATTCTCTTGTGAATCGCATCACTAAACTT  
CCTCTCCATTCTAGCTCATCTACCCCTGTCACGATCATCCTGGAGGGAAAGACATGCTCTAGTAAA  
GGCTGCAAGCTGGTCACAGTACTGTCCAAGTTCTGAAGTTGCTGAACCTCCTGTCTTCTGTTCAA  
AGTAACCTGAATCTCTCCAATTGTCCTTCCAAGTGGACTTTCTCGCAGACATCCAG

**11724-2**

TCATTGCCTGTGATGGCATCTGGATGTGATGAGCAGCCAGGAAGTTGATTTCAATCAAAGGATT  
CAGCATGTGGTGGAAAGCTGTGAGGCAAGAGAAACAAGAACGACTGTATGGCAAGTTAAGAACGACAGAGGCAA  
ACAAGAAGGAGACAGAAAAGCAGTTGCAGGAAGCTGAGCAAGAAATGGAGGAAATGAAAGAAAAGATGAG  
AAAGTTGCTAAATCTAACAGCAGAAAATCCTAGAGCTGGAAAGAGAACGACGGCTAGGGCAGAGG  
TGCACCCCTGCAGGAGATACAGCTAAAGAGTGTATGGAAACACTCTTCTTCAATGCCAGCATGAAGGAA  
GAACTTGAAAGGGTCAAAATGGAGTATGAAACCTTCTAAGAAGTTCAGTCTTAATGTCAGAAAGAC  
TCTCTAAGTGAAGAGGTTCAAGATTAAAGCATCAGATAGAAGGTAATGTATCTAAACAAGCTAACCTAGAG  
GCCACCGAGAACATGATAACCAAACGAATGTCAGTGAAGAGGGAACACAGTCTATACCAGGT

**11725-32-1.2**

AAGCCAATAATCACCATTTATTACTTAATATGCCAACCACTGTACTGGCAGTCACAAATTCTCACCGTT  
ACAACAACCCCATGAGGTATTATTCCCATTCTATAGATAGGGAAACCACAGCTCAAGTAAGTTAGGAAACT  
GAGCCAAGTATAACAGAACAGAAGTGGCAAACAGTAGAAGGAAAGACTGACACTGCTATGCTGGCCTC  
CAGTGTCTGGCTTTTACACGGGtCAATGTCTCCAGCGCTGCTGCTGCATTACCATGCCCTC  
ATTGTTTCTCCTCTGGTCAACTGCATCCTCAAAGAATCTAACTCATTCCAGAGACCACCTATTCTT  
TCTCTCTTCTGAAATTACTTTAATAATTCTCATGAGGGGGAAAAGAAGATGCCTGTTGGTAGTTTGTG  
TTAAGCTGCTCAATTGGGACTTAAACAATTGTTCATCTGTACATCCTGTAACAGCTGTGTTTGCTA  
GAAAGATCACTCTCCCTCTTTAGCATGGCTCAACCTCTCAATTCAATTCTTCAACACAAT  
CTCAAGTTCTCAAACGTGATGCAGAAGAGGCCTTTCAAGTTATGTTGCTACTTCCTGAACATGTGC  
TTTAAAGATTCAATTCTTCTTGAAGATCCTGTAACCCTCCGTATTGGCTAGGTCTTCTCTTCT  
CCAAAACAGCCTCATGGTATTCTGTTCTCTTTAATAAGTTCAAGGAGCTCAGAAC

**11726-1&2**

CAAGCTTTTTTTTTAAAAAGTGTAGCATTAAATGTTTATTGTCACGCAGATGGCAACTGGTTATG  
TCTTCATATTATTTGTAAATTAAAAAAATTACAAGTTAAATGCCAATGGCTGGTTATTTCA  
AAACATGATTAGACTAATTCAATTAAATGGTGGCTCAAGCTTCTTATTGGCTCCAGAAAATTCA  
CCCCACCTTTGCTCCCTTAAACTGGAATGTTGGCATGCATTGACTTCACACTCTGAAGCA  
ACATCCTGACAGTCATCCACATCTACTCAAGGAATATCACGTTGAATACTTT  
CAGAGAGGGAAATGAAAGAAAGGCTGATCAT  
TTTGAAGGCCACACCACGTGGTGAGAAGTCAACTACAAGTTATCACCTG  
CAGCGTCCAAGGCTTCTGACGAGCGGCTGTAAGG  
ACCGATGGAAATGGATCCAAGCACCAACAGAGCTCAAGACTCGCTG  
CTGGCTGAATTGGATCCGA  
TATGCCATGGCCT

**11727-1&2**

AAGTGTAGCATTAAATGTTTATTGTCACGCAGATGGCAACTGGTTATGCTTCATATT  
TATTAAAAAAATTMCAAGTTAAATGCCAATGGCTGGTTATTT  
CAGAAAACATGATTAGACTAATT  
CATTAATGGTGGCTCAAGCTTCTTATTGGCTCCAGAAAATT  
CACCCACCTTGTCCCTTCTTAAACTG  
GAATGTTGGCATGCATTGACTTCACACTCTGAAGCA  
ACATCCTGACAGTCATCCACATCTACTCAAGGAA  
TATCACGTTGAATACTTT  
CAGAGAGGGAAATGAAAGAAAGGCTGATCAT  
TTTGCAAGGCCACACCACGT  
GGCTGAGAAGTCAACTACAAGTTATCACCTG  
CAGCGTCCAAGGCTCCTGAAAAGCAGTCTGCT  
CGATCTGCTTCAACCAC  
TTGGCTGGAGTCTGACGAGCGGCTGTAAGG  
ACCGATGGAAATGGATCCAA  
GCACCAAAACAGAGCTCAAGACTCGCTG  
CTGGCATGAATTGGATCCGA

*Fig. 15B*

**11728.1.40.19.19**

TACAAACTTATTGAAACGCACACGCGCACACACACAAACACCCCTGTGGATAGGGAAAAGCACCTGGCCA  
CAGGGTCCACTGAAACGGGGAGGGATGGCAGCTGTAAATGTGGCTTGCCACAACCCCTCTGACAG  
GGAAGGCCTTAGATTGAGGCCACCTCCATGGTATGGGAGCTCAGAATGGGTCCAGGGAGAATT  
GGTTAGGGGGAGGTGCTAGGGAGGCATGAGCAGAGGGCACCCCTCCGAGTGGGTCCCAGGGCTGCAG  
AGTCTTCAGTACTGTCCCTCACAGCAGCTGTCAAGGCTGGTCCCTCAAAGGGCGTCCCAGCGCGG  
GCCTCCCTGCGCAAACACTTGGTACCCCTGGCTGCGCAGCGGAAGCCAGCAGGACAGCAGTGGCGCCGA  
TCAGCACAACAGACGCCCTGGCGGTAGGGACAGCAGGCCAGCCCTGTGGTTGTCTGGCAGCAGGTC  
TGGTTATCATGGCAGAAGTGTCCCTCCACACTCACGTCTCACACCCACGTGAXGGTACXGGCCAGG  
AAG

**11728.2.40.19.19**

CCCGTGGGTGCCATCCACGGAGTTACCTGATCTTGAAGCAGGATGCCCGTCTGCACTGCAGTGG  
AAGCCCCGTGGGCAGCAGTGATGCCATCCCCGATGCCACGGCCTCTGGGAAGGGCAGCAACTGGAA  
GTCCCTGAGACGGTAAAGATGCAGGAGTGGCCGGCAGAGCAGTGGCATCAACCTGGCAGGGGCCACCC  
AGATGCCTGCTCAGTGTGGGCCATTGTCCAGAAGGGGACGGCAGCAGCTGTAGCTGGCTCCTCCGG  
GGTCCAGGCAGCAGGCCACAGGGCAGAACATGACCATCTGGGCACCAGCGTCCAGCCACCAGCCCTGCTG  
TTAAGGCCACCCAGCTCACCAGGGTCCACATGGTCTGCCTGCGTCCACTCCGCGGTCTGGCCCTGA  
TGGTTCTACCTGCTGTGAGCTGCCAGTGGGAAGTATGGCTGCTGCCAATGCCAACGCCACCTGCTGCT  
CCGATCACCTGCACTGCTGCCCAAGACACTGTGTGACCTGATCCAGAGTAAGTGCCTCTCCAAGGAGA  
ACG

**11730-1**

GAATCACCTTCTGGTTAGCTAGTACTTGTACAGAACAAATGAGGTTCCCACAGCGGAGTCTCCCTGGGC  
TCTGTTGGCTCTCGTAAGGCAGGCCTACACCTTCTCCTCTATGGAGAGGGGAATATGCATTAAG  
GTGAAAAGTCACCTCCAAAAGTGAGAAAGGGATTGCTGCTCAGGACTGTGGATTATTGGAATG  
TTTACAAATGGTGCTACAAAACAACAAAAGGTAAATTACAAATGTGTACATCACACATGCTTTAA  
GACATTATGCATTGTGCTCACATTCCCTAAATGTTTCAAAGGTGCTCAGCCTCTAGCCCAGCTGGAT  
TCTCCGGGAAGAGGCAGAGACAGTTGGCGAAAAAGACACAGGGAGGAGGGGGTGGTAAAGGAGAAA  
GCAGCCTCCAGTTAAAGATCAGGCCCTCAGTTAAAGGTAGCTCCCGCAXGCTGGCTCAXCGGAGTCT  
GGTCAGAGGGAGGAGCAGCAGCAGGGTGGACTGGCGT

**11730-2**

AACCGGAGCGCAGCAGTAGCTGGTGGCACCATGGCTGGATCACCACATCGAGGCGGTGAAGCGC  
AAGATCCAGGTTCTGCAGCAGCAGGCAGATGATGCAGAGGAGCGAGCTGAGCGCCTCCAGCGAGAAGTT  
GAGGGAGAAAGCGGGCCGGAACAGGGCTGAGGCTGAGGTGGCCTCTGAACCGTAGGATCCAGCTG  
GTTGAAGAAGAGCTGGACCGTGCTCAGGAGCGCCTGGCCACTGCCCTGCAAAAGCTGGAAAGAAGCTGAAA  
AAGCTGCTGATGAGAGTGAGAGAGGTATGAAGGTTATTGAAAACCGGGCTTAAAGATGAAGAAAAGATG  
GAACCTCAGGAATCCAACCTAAAGAAGCTAACAGCACATTGCAAGAGAGGCAGATAGGAAGTATGAAGAGGT  
GGCTCGTAAGTTGGTATCATTGAAGGAGACTTGGAACGCACAGAGGAACGAGCTGAGCTGGCAGAGTCC  
CGTTGCCAGAGAGATGGATGAGCAGATTAGACTGATGGACCAAGAACCTGAAGTGTCTGAGTGC

*Fig. 15C*

**11732.1contig**

GAGAACTTGGCCTTATTGTGGGCCAGGAGGGCACAAAGGTCAAGGAGGCCAAGGGAGGGATCTGGTT  
TCTGGATAGCCAGGTATGCATGGGTATCAGTAGGAATCCGCTGTAGCTGCACAGGCCTACTGCTGCA  
GTTCCGGGGAGAACACCTGCAGTCATGGCGTTGATGACCTCGTGGTACACGACAGAGCCATTGGTGCAG  
TGCAAGGGCACCGCATGGCTCCGTCAGGGCAGGCAGCAGGAGCATTGCTCCTGCACATCCTCG  
ATGTCAATGGAGTACACAGCTTGCTGGCACACTTCCCTGGCAGTAATGAATGTCCACTCCTCTGGAC  
TTACAATCTCCCACTTGATGTACTGCACCTTGGCTGTGATGTCTTGCAATCAGGCTCCTCACATGTGTCA  
CAGCAGGTGCCTGGAATTTCACGATTTGCCTCCTCAGCCAGACACTTGTGTTCATCAAATGGTGGCA  
GCCCGTGACCCTTCTCCTCCAGATGTACTCTCCTCT

**11732.2contig**

GCCTGGACCTGCCGGATCAGTGCACACAGTGACTGCTTGGCAAATGGCCAGACCTGCTGCAGAGTC  
ATCGTGTCAATTGTGACCATGGACCCCGGCCTCATGTGCCAACAGCCAGTCTCCTGTTGGTGGAGGA  
GACGTGTGGCTGCCGCTGGACCTGCCCTGTGTCACGGCAGTCCACTCGGCACATCGTCACCTTC  
GATGGGCAGAATTCAAGCTTACTGGTAGCTGCTCTATGTCATCTTCAAAACAAGGAGCAGGACCTGGA  
AGTGCTCCTCCACAATGGGGCCTGCAGCCCCGGGGCAAAACAAGCCTGCATGAAGTCCATTGAGATTAAG  
CATGCTGGCGTCTGCTGAGCTGCACAGTAACATGGAGATGGCAGTGGATGGAGACTGGCCTTGCCC  
CGTACGTTGGTAAAACATGGAAGTCAGCATCTACGGCGCTATCATGTATGAAGTCAGGTTACCCATCTG  
GCCACATCCTCACATACACCGCCXAAAACAACGAGTT

**11735-1-2**

AGATCAACCTCTGCTGGTCAGGAGGAATGCCTCCTGTCTGGATCTTGCTTGCAGTTCTCGATAGTRW  
CAaCTKKRYTSRAMSKMAAGKGYRATGRWMTTKSYWGWRASYKTMWWMRSGRARAYTTaGaCAYCCCMC  
CTCWgAGaCGSAGKACCARGTGCAGAgGTGGACTCTTCTGGATGTTGAGTCAGACAGGGTGCATCCATC  
TTCCAGCTGTTCCCAGCAAAGATCAACCTCTGCTGATCAGGAGGGATGCCCTCTTATCTGGATCTTGC  
CTTGACATTCTCGATGGTGTACTGGGCTCCACCTCGAGGGTGTGCTTACCAAGTCAGGGTCTCACGA  
AGATYTGCATCCCACCTCTGAGACGGAGCACCAGGTGCAGGGTRGACTCTTCTGGATGTTGAGTCAGAC  
AGGGTGCYCCATCTCCAGCTGcTTCCSaGCAAAGATCAACCTCTGCTGGTCAGGAGGRATGCCCTCCT  
TGTCYTGGATCTTGCYTTGACRTTCTCRATGGTGTACTCGGCTCCACTCGAGAGTGATGGCTTACCAAG  
TCAGGGTCTTCACGAAGATCTGCATCCCACCTCTAA

**11740.2.contig**

AAGTCACAAACAGACAAAGATTATTACAGCTGCAAGCTATATTAGAAGCTGAACGAAGAGACAGAGGTCA  
GATTCTGAGATGATTGGAGACCTCAAGCTCGAATTACATCTTACAAGAGGGAGGTGAAGCATCTCAAACAT  
AATCTGAAAAAGTGGAGGAGAAAGAAAAGAGGCTCAAGACATGCTTAATCACTCAGAAAAGGAAAAGAA  
TAATTAGAGATAGATTTAAACTACAAACTAAATCATTACAACACGGTTAGAACAAAGAGGTAAATGAACAC  
AAAGTAACCAAGCTGTTAAGTACAACATCAATCTATTGAAGAGGCAAAGTCTGTGGCAATGTGTGAG  
ATGGAAAAAAAGCTGAAAGAAGAAAGAGAAGCTCGAGAGAAGGGCTGAAAATCGGTTGTTCAGATTGAGAA  
ACAGTGTCCATGCTAGACGTTGATCTGAAGCAATCTCAGCAGAAACTAGAACATTGACTGGAAATAAAGA  
AAGGATGGAGGATGAAGTTAAGAATCTA

*Fig. 15D*

**11765.2&64.2.contig**

CGCCTCCACCATGTCCATCAGGGTGACCCAGAAGTCTACAAGGTGTCCACCTCTGGCCCCGGGCCTTC  
AGCAGCCGCTCCTACACGAGTGGGCCGGTCCCGCATCAGCTCTCGAGCTCTCCCAGTGGCAGCA  
GCAACTTTCGCGGTGGCCTGGGCCGGCTATGGTGGGCCAGCGGCATGGGAGGCATACCGCAGTTA  
CGGTCAACCAGAGCCTGCTGAGCCCCCTTGTCCCTGGAGGTGGACCCAACATCCAGGCCGTGCGCACCC  
AGGAGAAGGAGCAGATCAAGACCCCTAACAAACAAGTTGCCTCCTCATAGACAAGGTACGGTCTGGAG  
CAGCAGAACAAAGATGCTGGAGACCAAGTGGAGCCTCCTGCAGCAGCAGAACAGGGCTGAAGCAACATGG  
ACAACATGTTGAGAGCTACATCAACARCTTAGGCCAGCTGGAGACTCTGGGCCAGGAGAACAGTGA  
GCTGGAGGCGGAGCTGGCAACATGCAGGGCTGGTGGAGGACTTCAAGAACAGTATGAGGATGAGATC  
AATAAGCGTACAGAGATGGAGAACGAATTGTCCTCATCAAGAACAGTGGATGAAGCTTACATGAACAA  
GGTAGAGCTGGAGTCTGCCCTGGAGGGCTGACCGACGAGATCAACTCCTCAGGCAGCTGTATGAAGAG  
GAGATCCGGGAGCTGCAGTCCCAGATCTGGACACATCTGTGGTGTCCATGGACAACAGCCGCTCCC  
TGGACATGGACAGCATATTGCTGAGGTCAAGGCACAGTACGAGGATATTGCCAACCGCAGCCGGCTGA  
GGCTGAGAGCATGTACCAAGTATGAGGAGCTGCAGAGCCTGGCTGGGAAGCACGGGATGACCT  
GCGGCGCACAAAGACTGAGATCTGAGATGAACCCGGAACATCAGCCGGTXCAGGCTGAGATTGAGG  
GCCTCAAAGGCCAGAXGGCTXCCCTGGAXGXCCGCCAT

**11767.2.contig**

CCCGGAGCCAGCCAACGAGCGAAAATGGCAGACAATTTCGCTCCATGATGCCTTATCTGGGCTGGAA  
ACCCAAACCCCTCAAGGATGGCCTGGCGCATGGGGAACCCAGCCTGCTGGGGCAGGGGCTACCCAGGG  
GCTTCCTATCCTGGGGCTACCCCGGGCAGGCACCCCCAGGGCTTATCCTGGACAGGCACCTCCAGGC  
GCCTACCCCTGGAGCACCTGGAGCTTATCCCGGAGCACCTGCACCTGGAGTCTACCCAGGGCCACCCAGC  
GGCCCTGGGGCCTACCCATCTTCTGGACAGCCAAGTGCCACCGGAGCCTACCCCTGCCACTGGCCCCTATG  
GCGCCCTGCTGGGCCACTGATTGTGCCTTATAACCTGCCCTGGCTGGGGAGTGGTGCCTCGCATGCT  
GATAACAATTCTGGGCACGGTGAAGCCCAATGCAAACAGAATTGCTTAGATTCAAAGAGGGAAATGATGT  
TGCCTTCACTTAACCCACGCTCAATGAGAACACAGGAGAGTCATTGGTTGCAATACAAGCTGGATAA

**11768-1&2**

GGGAATGCAACAACTTATTGAAAGGAAAGTGAATGAAATTGTTGAAACCTAAAAGGGGAAACTAGAC  
ACCCCCCCTCRAGCGMAGKACCARGTCRAGtGGACTCTTCTGGATGTTGATGTCAGACAGGGTRCG  
WCCATCTTCCAGCTGTTYCCRGCAGGATCAACCTCTGCTGATCAGGAGGRATGCCCTTATCTTGG  
TCTTGCCTTGACATTCTCGATGGTGTCACTGGGCTCCACCTCGAGGGTGTGGTCTTACCAAGTCAGGGTC  
TTCACGAAGATYTGCATCCCACCTCTGAGACGGAGCACCAGGTGCAGGGTRGACTCTTCTGGATGTTGTA  
GTCAGACAGGGTGCYCCATCTTCCAGCTGcTTCCSaGCAAAGATCAACCTCTGCTGGTCAGGAGGRATG  
CCTTCCCTGTCYTGGATCTTGCYTTGACRTTCTCAATGGTGTCACTGGCTCCACTTCGAGAGGTGATGGTC  
TTACCAAGTCAGGGTCTTACGAAGATCTGCATCCCACCTCTAAGACGGAGCACCAGGTGCAGGGTGGACT  
CTTCTGGATGgTTGAGTCAGACAGGGTGCCTCATCTTCCAGCTGTTCCCAGCAAAGATCAACCT

**11768-1&2-11735-1&2**

AGGTTGATCTTGCTGGAAACAGCTGGAAAGATGGACGCACCCTGTCTGACTACAACCATCCAGAAAGAGT  
CCACCCCTGCACCTGGTGCCTCGTCTAGAGGTGGGATGCAGATCTCGTAAGGACCCCTGACTGGTAAGAC  
CATCACTCTCGAAGTGGAGCCGAGTGACACCATTGAGAAYGTCAARGCAAAGATCCARGACAAGGAAGGC  
ATYCCTCCTGACCAGCAGAGGTTGATCTTGCTSGGAAAgCAGCTGGAAGATGGRCGCACCCTGTCTGACTA  
AACACATCCAGAAAGAGTCYACCCCTGCACCTGGTGCCTCGAGGTTGGAGGCCAGTGACACCATCGAGAATGTCAAGGCAAAGAT  
CCCTGACTGGTAAGACCATCACCCCTCGAGGTTGGAGGCCAGTGACACCATCGAGAATGTCAAGGCAAAGAT  
CCAAGATAAGGAAGGCATCCCTCCTGATCAGCAGAGGTTGATCTTGCTGGAAACAGCTGGAAGATGGAC  
GCACCCCTGTCTGACTACAACATCCAGAAAGAGTCACCTGCACYTGGTMCTBCGtCTYaGAGGKGGRTG  
caaaTCTWMGTKWagaCaCtCaCTKKYAAAGRYYaTCAMCMWtgAKKTCgAKYSCASTKWCaCTWTCRAKAAMGT  
YRWWGCAWagaTCCMAGACAAGGAAGGCATTCCCTGACCAGCAGAGGTTGATCT

**11769.1.contig**

ATGGAGTCTCACTCTGCGACCAGGCTGGAGCGCTGTTGCGATATGGCTCACTGCAGTCTCCACTTC  
CTGGGTTCAAGCGATCCTCCTGCCTCAGCCTCCGAGTAGCTGGACTACAGGCAGGCGTCACCATAATT  
TTGTATTTTAGTAGAGACATGGTTGCCATGTTGGCTGGCTCGAACCTCTGACCTCAAGTGATC  
TGTCTGGCCTCCCAAAGTGTGGATTACAGGCAGGCCAACGCTCCGGCCAGGGAAACAACTTAGA  
ATGAAGGAAATATGCAAAGAACATCACATCAAGGATCAATTAAATTACCATCTATTAAATTACTATATGTGGT  
AATTATGACTATTCCTAACGATTCTACGTTGACTGCTTGAGAAGATGTTGCTGCATGGTGGAGAGTGG  
AGAAGGCCAGGATTCTAGGTT

**11769.2.contig**

AGCGCGGTCTTCCGGCGAGAAAGCTGAAGGTGATGTGGCCGCCCTCAACCGACGCATCCAGCTCGTT  
GAGGAGGAGTTGGACAGGGCTCAGGAACGACTGGCCACGGCCCTGCAGAAGCTGGAGGAGGCAGAAAAAA  
GCTGCAGATGAGAGTGAGAGAGGAATGAAGGTGATAGAAAACCGGGCCATGAAGGATGAGGAGAAGATGG  
AGATTCAAGGAGATGCAGCTCAAAGAGGCCAACGCACATTGCGGAAGAGGGCTGACCGCAAATACGAGGAGGT  
AGCTCGTAAGCTGGTCATCCTGGAGGGTGAGCTGGAGAGGGCAGAGGAGCGTGCGGAGGTGCTGAACT  
AAAATGTGGTGACCTGGAAGAAGAACTCAAGAATGTTACTAACATCTGAATCTCTGGAGGCTGCATCTGA  
AAAGTATTCTGAAAAGGAGGACAAATGAAGAAGAAATTAAACTCTGTCTGACAAACTGAAAGAGGCTGA  
GACCCGTGCTGAATTGAGAGAGAACGGTTGAAAAGACAATTGATGACCTGGAAGAGAAC  
TTGCCAGC

**11770.1.contig**

GTGCACAGGTCCCATTATTGTAGAAAATAATAATTACAGTGATGAATAGCTCTCTAAATTACAAAAC  
AGAAACCACAAAGAAGGAAGAGGAAAAACCCCAAGGACTTCCAAGGGTGAAGCTGTCCCCCTCCCTGCC  
ACCCTCCCAGGCTCATTAGTGTCCCTGGAAGGGCAGAGGACTCAGAGGGGATCAGTCTCCAGGGGCCCT  
GGGCTGAAGCGGGTGAGGCAGAGAGTCCTGAGGCCACAGAGCTGGCAACCTGAGCCGCTCTGGCC  
CCCTCCCCACCACTGCCAACCTGTTACAGCACCTCGCCCCCTCCCTAAACCCGTCCATCCACTC  
TGCACCTCCCAGGCAGGTGGGTGGGCCAGGCCTCAGCCATACTCCTGGCGCGGGTTGGTGAAGCAAG  
GCACAGTCCCAGAGGTGATATCAAGGCCT

**11770.2.contig**

GCAAGGAACCTGGTCTGCTCACACTTGCTGGCTTGCATCAGGACTGGCTTATCTCCTGACTCACGGTGC  
AAAGGTGCACTCTCGAACGTTAAGTCCGCCCCAGCGCTTGGATCCTACGGCCCCACAGCCGGATCC  
CCTCAGCCTCCAGGTCTCAACTCCCCTGGACGCTGAACAATGGCCTCCATGGGCTACAGGTAAATGGG  
CATCGCCTGGCCGTCTGGCTGGCCGTATGCTGTGCTGCCGTGCCATGTGGCGCGTGCAC  
GGCCTTCATCGGAGAACATTGTCACCTCGCAGACCCTGGGAGGGCTATGGATGAACGTGCTGGTG  
CAGAGCACCAGGAGATGCAAGGTGTACGACTCGCTGGACTGCCGCAGGACCTGCAGGCG  
GCCCGCCCTCGTCATCATCA

**11773.1.contig**

TGCAAAAGGGACACAGGGTTAAAAAATTCTCTTCCCCCTCCCCAAACCTGTACCCCAGCTCCC  
CGACCACAACCCCTTCCTCCCCGGGAAAGCAAGAAGGAGCAGGTGTGGCATCTGCAGCTGGAAAGA  
GAGAGGCCGGGGAGGTGCCAGCTGGCTGGCTCTTCCAAATATAACXTGTGTCAAACACTGG  
AAATCCTCCAGCACCCACCACCCAAGCACTCTCCGTTCTGCCGGTGTGGAGAGGGCGGGGGCAG  
GGCGCCAGGCACCGGCTGGCTGCCTACTGCATCCGCTGGGTGTGCACCCCGCAGCCTCGCTG  
CTCATTGTAGAAGAGATGACACTCGGGTCCCCCGATGGTGGGGCTCCCTGGATCAGCTCCGGTG  
TTGGGGTTCACACACCAGCACTCCCCACGCTGCCGTTAGAGACATTTGCACTGTTGAGGTTGTACAG  
GCCATGCTTGTACAGTTG

**11778.1.contig**

GGGTTGGAGGGACTGGTTCTTATTCAAAAAGACACTTGCAATATTCAAGTATCAAAACAGTTGCACTATTG  
ATTCTCTTCTCCAATCGGCCAAAGAGACACATAAAAGGAGAGTACATTAAAGCCAATAAGCTGCA  
GGATGTACACCTAACAGACCTCTAGAAACCTTACCAAGAAAATGGGACTGGTAGGAAAGGAAACTTAAA  
AGATCAACAAACTGCCAGCCCACGGACTGCAGAGGCTGTCACAGCCAGATGGGTGGCCAGGGTGCAC  
AAACCCAAAGCAAAGTTCAAAATAATATAAAATTAAAAAGTTTGTACATAAGCTATTCAAGATTCTCCAG  
CACTGACTGATACAAGCACAATTGAGATGGCACTCTAGAGACAGCAGCTCAAACCCAGAAAAGGGTGA  
TGAGATGAGTTACATGGCTAAATCAGTGGAAAAACACAGTCTCTTCTTCAAGGAGGCA  
GGAAAGCAATTAAAGTGGCACCTAACATAAGGGGACATGATCCATTCTGAAGCAGTTGTGAAGGGG

**11778-2&30-2**

CAGGAACCGGAGCGCGAGCAGTAGCTGGGTGGCACCATGGCTGGATCACCACCATCGAGGCAGGTGAA  
GCGCAAGATCCAGGTTCTGCAGCAGCAGGAGATGATGCAGAGGAGCGAGCTGAGCGCCTCCAGCGAGA  
AGTTGAGGGAGAAAGGCGGGCCGGAACAGGGCTGAGGCTGAGGTGGCCTCTGAACCGTAGGATCCA  
GCTGGTTGAAGAAGAGCTGGACCGTGCTCAGGAGCGCCTGGCCACTGCCCTGCAAAAGCTGGAAGAAGCT  
AAAAAGCTGCTGATGAGAGTGAGAGAGGTATGAAGGTTATTGAAAACCGGGCTAAAAGATGAAGAAAA  
GATGGAACCTCAGGAAATCCAACCAAAGAAGCTAACAGCACATTGCAAGAGAGGAGATAGGAAGTATGAAG  
AGGTGGCTCGTAAGTTGGTGTATTGAAGGAGACTGGAACGCACAGAGGAACGAGCTGAGCTGGCAGA  
GTCCCGTTGCCAGAGAGATGGATGAGCAGATTAGACTGATGGACCAGAACCTGAAGTGTCTGAGTGC

**11782.1.contig**

ATCTACGTCATCAATCAGGCTGGAGACACCATGTTCAATCGAGCTAAGCTGCTCAATATTGGCTTCAAGAG  
GCCTTGAAGGACTATGATTACAAC TGCTTGTCAGTGATGTGGACCTCATTCCGATGGACGACCGTAAT  
GCCTACAGGTGTTTCGCAGCCACGGCACATTCTGTTGCAATGGACAAGTCGGGTTAGCCTGCCATA  
TGTTAGTATTTGGAGGTGCTCTGCTCAGTAAACAACAGTTCTGCCATCAATGGATTCCCTAATAAT  
TATTGGGGTTGGGGAGGAGAAGATGACGACATTAAACAGATTGTCATAAAGGCATGTCTATATCACGT  
CCAAATGCTGTAGTAGGGAGGTGCGAATGATCCGGCATTCAAGAGACAAGAAAAATGAGCCCAATCCTCA  
GAGGTTGACCGGATCGCACATACAAAGGAAACGATGCGCTTCGATGGTTGAACTCACTTACCTACAAGG  
TGTTGGATGTCAGAGATAACCGTTATACCCAAATCAC

**11782.2.contig**

CTAGACCTCTAATTAAAAGGCACAATCATGCTGGAGAATGAACAGTCTGACCCCAGGGCACAGCGAATT  
TTAGGGAAGGAGGCAAAGAGGTGAGAAGGGAAAGGAAGGAAGGAGAACAATAAGAACTGGA  
GACGTTGGGTGGGTCAAGGGAGTGTGGTGGAGGCTGGAGAGATGGTAAACAAACCTGACTGCTATGAGTT  
TTCAACCCCATAGTCTAGGGCCATGAGGGCGTCAGTTCTGGTGGCTGAGGGTCCTCCACCCAGCCCAC  
CTGGGGGAGTGGAGTGGGGAGTTCTGCCAGGTAAGCAGATGTTGCTCCCAAGTTCTGACCCAGATGTC  
TGGCAGGATAACGCTGACCTGTTCCCTCAACAAGGGACCTGAAAGTAATTGCTCTTAC

**11783-1 & 2**

CCGAATTCAAGCGTCAACGATCCYCTCCCTTACCATCAAATCAATTGGCCACCAATGGTACTGAACCTACGAG  
TACACCGACTACgGGCGGACTAACCTCAACTCCTACATACTTCCCCATTATTCTAGAACCCAGGCGACCT  
GCGACTCCTTGACGTTGACAATCGAGTAGTACTCCGATTGAAGCCCCATTCTGATAATAATTACATCACA  
AGACGTCTTGCACTCATGAGCTGCCCCACATTAGGCTAAAAACAGATGCAATTCCCGGACGTCTAAGCC  
AAACCACTTCACCGCTACACGACCAGGGGTATACTACGGTCAATGCTCTGAAATCTGGAGCAAACAC  
AGTTTCATGCCCATGTCCTAGAATTAAATTCCCTAAAAATCTTGAAATAGGGCCGTATTACCCCTATAGC  
ACCCCTCTACCCCTCTAG

**11786.1.contig**

GCTCTCACACTTTATTGTTAATTCTCTTCACATGGCAGATACAGAGCTGTCGTTGAAGACCACCACTGA  
CCAGGAAATGCCACTTTACAAATCATCCCCCTTTCATGATTGGAACAGTTCTGACCGTCTGGAG  
CGTTGAAGGGTGACCAGCACATTGACATGCAAAAAAGGAGTGACCCCAAGGCCTCAACCACACTCCCA  
GAGCTCACCATGGGCTGCAGGTGACTGCCAGGTTGGGTTCTGAGCTTCTGCTGCTGCGGTGG  
GAGGCCCTCAAGAACTGAGAGGCCGGGTATGCTCATGAGTGTAAACATTACGGGACAAAGCGCATCA  
TTAGGATAAGGAACAGCCACAGCACTTCATGCTTGAGGGTTAGCTGTAGGAGCAGGGTAAAGGATTCCA  
GTTTATGAAAATTAAAGCAAACAACGGTTTAGCTGGTGGAAACAGGAAACTGTGATGTCGGCCAAT  
GACCACCATTCTGCCATGTGAAGGTCCCCATGAAACC

**11786.2.contig**

CAAGCGCTTGGCGTTGGACCCAGTCAGTGAGGTTCTGGGTTGTGCCTTGGGATTTGGTTGAC  
CCAGGGGTAGCCTAGGAAGGTCTCAGGAGGAGGCCAGTCCCCCTCAGTACCACCCCTCTCCCC  
ACTTCCCTCTCCGGAACATCTGGAAATCAACAGCATATTGACACGTTGGAGGCCGAGCCTGAACATG  
CCCCTCGGCCCCAGCACATGGAAAACCCCTCCTGCCTAAGGTGTCTGAGTTCTGGCTTGGCAT  
TTCCAGACTGAAATTCTCATCAGTCATTGCTTTGAGAGAACCTCAGATCAGGTGCACCTG  
GGAGAAAGACTTGTCCCCACTACAGATCTATCCTCCCTGGGAAGGGCAGGGAATGGGGACGGTGT  
ATGGAGGGGAAGGGATCTCCTGCGCCCTCATTGCCACACTGGTGGGACCATGAACATCTTAGTGTCTG  
AGCTTCTCAAATTACTGCAATAGGA

**13691.1&2**

AGCGTCAAATCAGAATGGAAAAGACTCAAAACCATCATCAACACCAAGATCAAAGGACAAGRATCCTCAAG  
AAACAGGAAAAAACTCCTAAAACACCAAAAGGACCTAGTTCTGTAGAAGACATTAAAGCAAAATGCAAGCAA  
GTATAGAAAAGGTGGTCTCTTCCCAAAGTGGAGGCCAATTCAATTATGTGAAGAATTGCTCCGGAT  
GAUTGACCAAGAGGCTATTCAAGATCTCTGGCAGTGGAGGAAGTCTTTAAGAAAATAGTTAAACAATTG  
TTAAAAAAATTTCGTCTTATTCTATTGTAAACAGTTGATATCTGGCTGTCTTTATAATGCAGAGTGAGA  
ACTTCCCTACCGTGTGATAATGTTGTCAGGTCTATTGCCAAGAATGTTGTCCTGTTAA  
GTTTTAAAGATGGAACCTCACCCCTTGCTGGTTAAGTATGTATGGAATGTTGATAGGACATAGTAGTA  
GCGGTGGTCAGACATGGAAATGGTGGSMGACAAAATATACATGTGAAATAA

**13692.1&2**

TCCGAATTCCAAGCGAATTATGGACAAACGATTCTTTAGAGGATTACTTTTCAATTCTGGTTTAGTAAT  
CTAGGCTTGCCTGTAAAGAATACAACGATGGATTAAATACTGTTGTGGAATGTGTTAAAGGATTGATT  
CTAGAACCTTGTATATTGATAGTATTCTAACTTCATTCTTACTGTTGCAGTTAATGTTCATGTTCTGC  
TATGCAATCGTTATATGCACGTTCTTAATTAGATTTCTGGATGTAGTTAAACAACAAAAAG  
TCTATTAAAAGTGTAGCAGTAGTTACAGTTAGCAAAGAGGAAAGTTGTTGGGTTAAACTTGTATTTC  
TTCTTATAGAGGCTCTAAAAGGTATTTATATGTTCTTTAACAAATTGTTACAACCTTAAACAT  
CAATGTTGGATAAAACAAGACCCAGCTTATTCTGC

**13693.2**

TGTGGTGGCGCGGGCTGAGGTGGAGGCCAGGACTCTGACCCCTGCCCTGCCTCAGCAAGGCCCCGG  
CAGCGCCGGCCACTACGAACGTGGCTGGGTTGAAAATAGGCCAGTAAAGCTGAATGAAATTGTCGGG  
AATGAAGACACCGTGAGCAGGCTAGAGGTCTTGCAAGGGAAAGGAATGTGCCAACATCATCATTGCGG  
GCCCTCCAGGAACCGGCAAGACCACAAGCATTCTGTGCTGGCCGGCCCTGCTGGGCCAGCACTCAA  
AGATGCCATGTTGGAACCTCAATGCTCAAATGACAGGGCATTGACGTTGTGAGGAATAAAATTAAATGTT  
TGCTCAACAAAAGTCACTCTCCAAAGGCCGACATAAGATCATCATTCTGGATGAAGCAGACAGCATGAC  
CGACGGAGCCCAGCAAGCCTGAGGAGAACCATGGAAATCTACTCTAAACCACTCGTTGCCCTGCTG  
TAATGCTCGGATAAGATCATCGAGCC

**13696.1-13744.1**

CTTGCAAAGCTTTATTCATGTCGGCATGGAATCCACCTGCACATGGCATCTAGCTGTGAAGGAGA  
AAGCAGTGCACGAGAAGGAATGAGTGGCGAACCAACGGCCTCCACAAGCTGCCCTCAGCAGCCTGC  
CAAGGCCATGGCAGAGAGAGACTGCAAACAAACACAAGCAAACAGAGTCTTCACAGCTGGAGTCTGAAA  
GCTCATAGTGGCATGTGTGAATCTGACAAAATTAAAAGTGTGCATAGTCCATTACATGCATAAAACACTAATA  
ATAATCCTGTTACACGTGACTGCAGCAGGCTCAGCTCCACACTGCCCTGCCACATCACATCA  
AGTGCATGGTTAGAGGGTTTCATATGTAATTCTTATTCTGTAAAAGTAACAAAATACAGAACAA  
AACTTCCCTTTAAAACATAATGTTACAAATCTGTATTACACTTGATATAAATAGTATATAAGCTGATC

**13700.1**

CAAGGGATATATGTTGAGGGTACRGRGTGACACTGAACAGATCACAAAGCACGAGAACATTAGTTCTCTC  
CCTCCCCAGCGTCTCCTCGTCTCCCTGGTTCCGATGTCCACAGAGTGGAGATTGTCCTAAGTAACTGC  
ATGATCAGAGTGTGKCTTATAAGACTCTCATTAGCGTATCCAATTAGCAATTGCTCATCAAATGCCG  
TTTTGCCAGGCTACAGGCCTTCAGGAGAGTTAGAATCTCATAGTAAAAGACTGAGAAATTAGTGCCA  
GACCAAGACGAATTGGGTGTGAGGCTGCATTNCTTCTTAATTCAAATGCTCCTGGTAAGCCTGCT  
GGGAGTCGACACAAGTGGTTGTTGCTCCAGATGCCACTCAGAAAGATACTAAAATACTCCTT  
TCATTCAAAGTAGAACAC

**13700.2**

TCCGGAGCCGGGTAGTCGCCGCCGCCGCCGCCGCAGCCACTGCAGGCACCGCTGCCGCCGCTG  
AGTAGTGGCTAGGAAGGAAGAGGTATCTCGCTCGGAGCTCGCTCGGAAGGGCTTGTCCCTGCA  
GCCCTCCCACGGGAATGACAATGGATAAAAGTGAGCTGGTACAGAAAGCCAAACTCGCTGAGCAGGCTGA  
GCGATATGATGATGGCTGCAGCCATGAAGGCAGTCACAGAACAGGGCATGAACCTCCAACGAAGAG  
AGAAATCTGCTCTGTTGCCTACAAGAATGTGGAAGGCCGCCGCTTCCCTGGCGTGTATCTCC  
AGCATTGAGCAGAAAACAGAGAGGAATGAGAAGAACAGCAGATGGCAAAGAGTACCGTGAGAAGATAG  
AGGCAGAACTGCAGGACATCTGCAATGATGTTGGAGCTTGGACAAATCTTATTCAAATGCTACAC  
AACCCAGAAA

**13701.1**

AAAAAGCAGCARGTTCAACACAAAATAGAAATCTCAAATGTAGGATAGAACAAAACCAAGTGTGAGGGG  
GGAAGCAACAGCAAAAGGAAGAAATGAGATGTTGCAAAAAAGATGGAGGAGGGTCCCTCCTCTGGG  
GAETGACTCAAACACTGATGTGGCAGTATACACCATTCCAGAGTCAGGGGTGTTCATCTTTTGGAGTA  
AGAAAAGGTGGGGATTAAGAAGACGTTCTGGAGGCTAGGGACCAAGGCTGGCTCTTCCCCCTCCCA  
ACCCCTTGATCCCTTCTGATCAGGGAAAGGAGCTCGAATGAGGGAGGTAGAGTTGGAAAGGGAAA  
GGATTCCACTTGACAGAATGGGACAGACTCCTCCCA

*Fig. 15J*

**13701.2**

TGGCAATAGCACAGCCATCCAGGAGCTTCARGCGATCTGGAGCAGTCAGTGCATGTTCCGCCGG  
AAGGCCTCCTCCACTGGTACACAGCGAGGGCATGGACGAGATGGAGTCACCGAGGCTGAGAGCAACA  
TGAACGACCTCGTCTTGAGTATCAAGCAGTACCAGGATGCCACCGCAGAAGAGGAGGAGGATTCGGTG  
AGGAGGCCGAAGAGGAGGCCATAAGGCAGAGCCCCATCACCTCAGGCTCTCAGTTCCCTAGCCGTCTT  
ACTCAACTGCCCTTCCTCCCTCAGAATTGTGTTGCTGCCTCTATCTGTTTTGTTTCTCTGG  
GGGGTCTAGAACAGTGCCTGGCACATAGTAGGCCTCAATAAAACTTGGTNTGAATGTCCT

**13702.2**

AGCTGGCGCTAGGGCTCGGTTGTGAAATACAGCGTRGTCAGCCCTGCGCTCAGTGTAGAAACCCACGCC  
TGTAAGGTCGGTCTCGTCCATCTGCTTTCTGAAATACACTAAGAGCAGCCACAAAAGTGAACCTCAA  
GGAAACCATAAAGCTGGAGTGCCTTAATTAAACCAGTTCCAATAAAACGGTTACTACCT

**13704.2-13740.2**

GGAGATGAAGATGAGGAAGCTGAGTCAGCTACGGGCARGCGGGCAGCTGAAGATGATGAGGATGACGAT  
GTCGATACCAAGAACAGAAGACCGACGAGGATGACTAGACAGCAAAAAAGGAAAAGTTAAA

**13706.1**

GATGAAAATTAAACTAAATTAAATCAAAGGCACTACGATACCACCTAAACCTACTGCCTCAGTGGCAGT  
AKGCTAAKGAAAGATCAAGCTACAGSACATYATCTAATATGAATGTTAGCAATTACATAKARGAACATGTTT  
GCTTCCAGAAGACTATGGNACATGGTATTGGGCCAAGAGGATATTGCCNGGAAAGGATCAAGA  
TAGATNAANGTAAAG

**13706.2**

GAGTAGCAACGCAAAGCGCTTGGTATTGAGTCTGGGSGACTTCGGTCCGGTCTCTGCAGCAGCCGTG  
ATCGCTTAGTGGAGTGCTTAGGGTAGTTGCCAGGATGCCAATATCAAATCTCAGCAGGCAGCTCCA  
CCAGGACTTATCTCASAAAATTGCTGACCGCCTGGCCTGGAGCTAGGCAAGGTGGTACTAAGAAATTCA  
GCAACCAGGAGACCTGTGGAAATTGGTAAAGTGTACCGTGGAGAGGATGTCTACATTGTTCAGAGTGG  
NTGTGGCGAAATCAATGACAATTAAATGGAGCTTTGATCATGATTAATGCCCTGCAAGATTGCTCAGCCAG  
CCGGGTTACTGCAGTCATCCCAGCTCCCTATGCCCGGCAGGATAAGAAAGATNAGAGCCGGGCCGC  
CAATCTCAGCCAAGCTTGGTGCAAATATGCTATGTAGCAGTGCAGATCATATTACCATGGACCTACA  
TGCTTCTCAAATTCAANGCTTTT

Inventor(s): Jennifer L. Mitcham et al.

Express Mail No. EV719392064US

**"REPLACEMENT SHEETS"**

**13707.3**

ATGCAAAGGGACACAGGGGTTCAAAAATTTCTCTCCCCCTCCCCAACCTGTACCCAGCT  
CCCCGACCACAACCCCCTCCTCCCCGGGGAAAGCAAGAAGGAGCAGGTGTGGCATCTGCAGCTGGGA  
AGAGAGAGGCCGGGAGGTGCCAGCTCGGTGCTGGTCTCTTCAAATATAATACGTGTGTCAGAACT  
GGAAAATCCTCCAGCACCCACCACCCAAGCACTCTCCGTTCTGCCGGTGTGGAGAGGGCGGNGGG  
CAGGGCGCCAGGCACCGGCTGGCTCGGTACTGCATCCGCTGGGTGCACCCCGCGA

**13710.2**

AGGTTGGAGAAGGTATGCAGGTGCAGATTGTCCAGGSK CAGCCACAGGGTCAAGCCAACAGGCCAGA  
GTGGCACTGGACAGACCATGCAGGTGATGCAGCAGATCATCACTAACACAGGAGAGATCCAGCAGATCCC  
GGTCAGCTGAATGCCGCCAGCTGCAGTATATCCGTTAGCCCAGCCTGTATCAGGCAGTCAAGTTGTG  
CAGGGACAGATCCAGACACTGCCAACATGCTAACAGATTACACAGACAGAGGTCCAGCAAGGACAGC  
AGCAGTTCAAGCCAGTTACAAGATGGACAGCAGCTTACCAAGATCCAGCAAGTCACCATGCCTGCC  
CANGACCTGCCAGCCATGTTCATCCAGTCAGGCCAACAGCCCTCNACGGGCAGGCCAGGTGA  
CCGGCGACTGAAGGGCTGAGCTGGCAAGGCCAANGACACCCAACACAATTTCGCCATACAGCCCCAG  
GCAATGGGCACAGCCTTCTCCAGAGGAC

**13710-1**

TGAGATTATTGCATTCATGCAGCTGAAGTCCATGCAAAGGRGACTAGCACAGTTTAATGCATTAAAA  
AATAAAAGGGAGGTGGGCAGCAAACACACAAAGTCCTAGTTCTGGTCCCTGGGAGAAAAGAGTGTGG  
CAATGAATCCACCCACTCTCCACAGGGATAATCTGTCTTAAATGCAAAGAATGTTCCATGCCCTTG  
GATGCAAATACACAGAGCTCTGGGTCAGAGCAAGGGATGGGAGAGGACCACGAGTGAAAAGCAGCTA  
CACACATTCACCTAATTCCATCTGAGGGCAAGAACACGTGGCAAGTCTGGGGTAGCAGCTGTT

**13711.1**

TCCAGACATGCTCCTGTCTAGGCGGGGAGCAGGAACCAAGACCTGCTATGGGAAGCAGAAAGAGTTAAGG  
GAAGGTTCCCTTCATTCCCTGTTCTCTTTGCTTTGAACAGTTAAATATACTAATAGCTAAGTCAT  
TTGCCAGCCAGGTCCCGGTGAACAGTAGAGAACAAAGGAGCTGCTAAGAATTAATTGCTTTTACCC  
CATTCAAACAGAGCTGCCCTGTTCCCTGATGGAGTTCCATTCTGCCAGGGCACGGCTGAGTAACACGAAG  
CCATTCAAGAAAGGCCGGGTGTGAAATCACTGCCACCCATGGACAGACCCCTCACTCTCCTCTAGCCG  
CAGCGCTACTTAATAATATTACTTGAATTATGATAACCGATTTCATGCCATGCCATCCTAAGGG  
CACTTGCCAGCTTATCGGACAGTCAAGCACTGTTGGACAACAGATAAAAGGAAAAGAAAAAGAAGA  
AAACAAACCGCAACTCTGT

*Fig. 15L*

**13711.2**

TGAGACGGACCCTGGCCTGGTCCCCCTCATKGCTGTCGTAGGACCTGACATGAAACGCAGATCTAGT  
GGCAGAGAGGAAGATGATGAGGAACCTCTGAGACGTCGGCAGCTCAAGAAGAGCAATTAAATGAAGCTAA  
CTCAGGCCTGGACAGTTGATCTGAAAGAAGAGATGGAGAAAGAGAGCCGGAAAGGTATCTCTGTTA  
GCCAGTCGCTACGATTCTCCATCAACTCAGCTCACATATTCCATCATCTAAAACGTACATCTCTCCCTGGC  
TATGGAAAGAAATGGGCTTCACC GG C T G T T C A C C G A C T C G C T C A G T A A C A G C T A T G G G A T G C A G  
CGGGGGAGT G C G A G A T T A C C A G A C A C T T C C A G A T G G C C A C A T G C T G C A A T G A G A T G G A C C G A G G A G T G  
TCTATGCCAACATGTTGAAACAAAGATATTCCATATGAAATGCTCATGGTACCAACAGAGGGCCGAAA  
CCAAATCTCAGAGAGGTGGACAGAA

**13713.1&2**

TCACTTATTTCTGTATAAAACCTATGTTGAGGCCACAGCTGGAGCCTGAGTCCGCTGCACGGAGAC  
TCTGGTGTGGTCTTGACGAGGTGGTCAGTGAACTCCTGATAGGGAGACTTGGTAATACAGTCTCCTTCC  
AGAGGTGGGGGGTCAGGTAGCTTAGGTCTAGAAATGGCATCAAAGGTGGCCTGGCGAAGTTGCCAG  
GGTGGCAGTGCAGCCCCGGCTGAGGTGTAGCAGTCATCGATACCAGCCATCATGAG

**13715.4**

CTGGAATATAGACCCGTATCGACAAAACCTTGAAACGAGGCTGACTGTGCCACCGTCCGCCAGCCATTG  
CTCCTACTGATGAGACAAGATGTGGTATGACAGAAATCAGCTTGTAAATTATGTATAATAGCTCATGCATGT  
GTCCATGTCATAACTGTCTTCATACGCTTCTGCACACTGGGGAGAAGAGGAGTACATTGAAGGGAGATTGGC  
ACCTAGTGGCTGGAGCTGCCAGGAACCCAGTGGCAGGGAGCGTGGCACTTACCTTGCCCTTGCTT  
CATTCTGTGAGATGATAAAACTGGCACAGCTTAAATAAAATATAATGAACA

**13717.1&2**

TGAATGGGGAGGAGCTGACCCAGGAAATGGAGCTTNGGAGACCAGGCCTGCAGGGATGGAACCTTCC  
AGAAGTGGGCATCTGTGGTGGTGCCTCTGGGAAGGAGCAGAAGTACACATGCCATGTGGAACATGAGGG  
GCTGCCTGAGCCCCCTCACCCCTGAGATGGGGCAAGGAGGAGCCTCCTCATCCACCAAGACTAACACAGTA  
ATCATTGCTGTTCCGGTTGTCCTTGGAGCTGTGGTCATCCTTGGAGCTGTGATGGCTTGTGATGAAGAG  
GAGGAGAAACACAGGTGGAAAAGGAGGGACTATGCTCTGGCTCCAGGCTCCAGAGCTGTGATATGTCT  
CTCCCAGATTGTAAAGTGTGAAGACAGCTGCCCTGGACTTGGTACAGACAAATGTCTTCACACATCT  
CCTGTGACATCCAGAGACCTCAGTTCTTTAGTCAGTGCTGTGATGTTCCCTGTGAGTCTGGGGCTCAA  
GTGAAGAACTGTGGAGCCCAGTCCACCCCTGCACACCAGGACCCATCCCTGCAGTGCCTGTGTTCCCTT  
CCACAGCCAACCTTGCTGCCAGCAAACATTGGTGGACATCTGCAGCCTGTCAGCTCCATGCTACCCCTG  
ACCTTCAACTCCTCACTTCCACACTGAGAATAATAATTGAATGTGGGTGGCTGGAGAGATGGCTCAGCGC  
TGACTGCTCTTCAAAGGTCTGAGTTCAAATCCCAGCAACCACATGGTGGCTACAACCACATGTAAATGG  
GATCTAATACCCCTCTGCAGTGTGAAGACASCTACAGTGTACTACATATAATAATAAG

*Fig. 15M*

**13719.1&2**

GGCCGGGCGCGCGCCCCGCCACACGCACGCCGGCGTCCAGTTATAAAGGGAGAGAGCAAGCA  
GCGAGCTTGAAGCTCTGTTGGTCTTGGATCCATTCCATCGGTCTTACAGCCGCTCGTCAGACTCC  
AGCAGCCAAGATGGTGAAGCAGATCGAGAGCAAGACTGCTTTCAGGAAGCCTGGACGCTGCAGGTGAT  
AAACTTGTAGTAGTTGACTTCTCAGCCACGTGGTGTGGGCTTGCAAATGATCAAGCCTTCTTCATTCC  
CTCTCTGAAAAGTATTCCAACGTGATATTCTTGAAGTAGATGTGGATGACTGTCAGGATGTTGCTTCAGAG  
TGTGAAGTCAAATGCATGCCAACATTCCAGTTTAAGAAGGGACAAAGGTGGGTGAATTTCTGGAGCC  
AATAAGGAAAAGCTGAAGCCACCATTAAATGAATTAGTCTAATCATGTTCTGAAAATATAACCAGCCATTG  
GCTATTAAAATTGTAATTTTTAATTACAAAAATATAAAATGAAGACATAAACCMGTTGCCATCTGC  
GTGACAATAAACATTAATGCTAACACTT

**13721.1**

TCACATAAGAAATTAGCAAGTTACRCTATCTTAAAAACACAACGAATGCATTTAATAGAGAAACCCCTTC  
CCTCCCTCCACCTCCCTCCCCACCCCTCATGAATTAAGAATCTAAGAGAAGTAACCATAAAACCAA  
GTTTGTGGAATCCATCATCCAGAGTGCTTACATGGTATTAGGTTAATATTGCCTTACAAAATTCTAT  
TTTAAAAAAAATTATAACCTTGATTGCTTACAAAAAAATTCACTACAAAAGTTCAATATATTGAAAATGCT  
TTTCCCCTCCCTCACAGCACCGTTTATATAGCAGAGAATAATGAAGAGATTGCTAGTCTAGATGGGGCA  
ATCTCAAATTACACCAAGACGCACAGTGGTTATTACCCCTCCCTCTCATAAG

**13721.2**

GGAAAGGATTCAAGAATTAGAGGACTTGCTTGCTRAGAAAAGACAACACTCTCGCGATGCTGACAGACA  
AAGAGAGAGAGATGGCGAAATAAGGGATCAAATGCAGCAACAGCTGAATGACTATGAACAGCTTCTTGAT  
GTAAAGTTAGCCCTGGACATGGAAATCAGTGCTTACAGGAAACTCTTAGAAGGCGAAGAAGAGAGGTTGAA  
GCTGTCTCCAAGCCCTTCTCCCGTGTGACAGTATCCCGAGCATCCTCAAGTCGTAGTGTACCGTACA  
AGAGGAAAGCGGAAGAGGGTTGATGTGGAAGAATCAGAGGCGAAGTAGTAGTGTAGCATCTCTCATTCC  
GCCTCAACCACTGGAAATGTTGCATCGAAGAAATTGATGTTGATGGAAATTATCCGCTGAAGAACAC  
TTCTGAACAGGATCAACCAATGGGAAGGCTGGGAGATGATCAGAAAATTGGAGACACATCAGTCAGTTA  
TAAATACCTCAA

**13723.1**

CATGGGTTTACCCAGGTTGGCCAGGCTGCTCTGAACTSCTGACCTCAGGTGATCCACCCGCCTCGGCCT  
CCCAAAGTGTGGATTACAGGCGTGAGGCCACCACGCCGGCCCCAAAGCTGTTCTTGTCTTAGCG  
TAAAGCTCTCCTGCCATGCAGTATCTACATAACTGACGTGACTGCCAGCAAGCTCAGTCACTCCGTGGTCTT  
TTCTCTTCCAGTTCTCTCTCTTCAAGTTCTGCCTCAGTCAAAGCTGCAGGTCCCCAGTTAAGTGT  
CAGGTGAGGGTTCTTGAACCTGGTTATCAGTCGAATTACCTCATGATGG

*Fig. 15N*

**13723.2**

GATGTGTTGGACCCTCTGTGTCAAAAAACCTCACAAAGAATCCCTGCTCATTACAGAAGAAGATGCATT  
TAAAATATGGGTTATTTCAACTTTTATCTGAGGACAAGTATCCATTAATTATTGTGTCAAGAAGAGATTGAAT  
ACCTGCTTAAGAACGTTACAGAACGCTATGGGAGGAGGTTGGCAGCAAGAACATTGAACATTATAAAATCA  
ACTTGATGACAGTAAAATGGCCTTCTGCATGGGAACCTATTGAGCTTATTGGAAATGGACAGTTAGCA  
AAGGCATGGACCGGCAGACTGTGTATGGCAATTAAATGAAGTCTTAATGAACCTATTAGATGTGTTAA  
AGCAGGGTTACATGATGAAAAAGGGCCACAGACGGAAAACGGACTGAAAGATGGTTGACTAAAACCC  
AACATAATTCTTACTATGTGAGTGAGGATCTGAAGGATAAGAAAGGAGACATTCTGGATGAAAATTGC  
TGTGTAGAAGTCCTGCCTGACAAAAGATGGAAAGAAATGCCTTT

**13725.1**

GAUTGGTCTTATTCAAAAAGACACTTGTCAATATTCAAGTRCAAAACAGTTGCACTATTGATTCTCTTC  
TCCCACATCGGCCCAAAGAGACCACATAAAAGGAGAGTACATTAAAGCCAATAAGCTGCAGGATGTACAC  
CTAACAGACCTCCTAGAACCTTACCAAGAAAATGGGACTGGTAGGGAAAGCTAAAGATCAACAA  
ACTGCCAGCCCACGGACTGCAGAGGCTGTACAGCCAGATGGGTGCCAGGGTGCCACAAACCCAAAG  
CAAAGTTCAAAATAATATAAAATTAAAAAGTTTGTACATAAGCTATTCAAGATTCTCCAGCACTGACTGA  
TACAAAGCACAATTGAGATGGCACTCTAGAGACAGCAGCTCAAACCCAGAAAAGGGTATGAGATGAAG  
TTTCACATGGCTAAATCAGTGGAAAAACACAGTCTTCTTCTTCAAGGANGCAGGAAGCAAT  
TAAGTGGTCACCTAACATAAGGGGAC

**13725.2**

TGGGTGGGCACCATGGCTGGATACCACCATCGAGGCGGTGAAGCGCAAGATCCAGGTTCTGCAGCAG  
CAGGCAGATGATGCAGAGGAGCGAGCTGAGCGCCTCCAGCGAGAAAGTTGAGGGAGAAAGGCCGGCCCG  
GGAACAGGCTGAGGCTGAGGTGGCCTCCTGAACCGTAGGATCCAGCTGGTTGAAGAAGAGCTGGACCGT  
GCTCAGGAGCGCCTGGCACTGCCCTGCAAAAGCTGGAAGAAGCTGAAAAAGCTGCTGATGAGAGTGAGA  
GAGGTATGAAGGTTATTGAAAACCGGGCTTAAAGATGAAGAAAAGATGGAACCTCAGGAAATCCAACTC  
AAAGAAGCTAACGACATTGCAGAACAGGGAGATAGGAAGTATGAAGAGGTGGCTCGTAAGTTGGTATCAT  
TGAAGGAGACTTGGAACCGCACAGAACGAGCTTGAGCTGGCAAAAGTCCCGTTGCCAGAGATGG  
GATGAACCAAGATTAGACTGATGGACCANAACC

**13726.1&2**

AGGGGCNGCGGGTGCCTGGCCACTGGGTGACCGACTAGCCTGGCCAGACTCTCAGCACCTGGAAAGCG  
CCCCGAGAGTGACAGCGTGAGGCTGGAGGGAGCTGGCTTGAGCTTAAACTCTGCTCTGAGCCT  
CCTTGTGCGCTGCATTAGATGGCTCCCGCAAAGAACGGTGGCGAGAAGAAAAAGGGCCGTTCTGCCATC  
AACGAAGTGGTAACCGAGAACATACACCATCAACATTACAAGCGCATCCATGGAGTGGCTTCAAGAACG  
TGCACCTCGGGCACTCAAAGAGATTGGAAATTGCCATGAAGGAGATGGGAACCTCCAGATGTGCGCATTG  
ACACCAGGCTAACAAAGCTGTCTGGCCAAGGAATAAGGAATGCCATACCGAACATCGGTGTGGC  
TGTCCAGAAAACGTAATGAGGATGAAGAGATTACCAAATAAGCTATATACTTGGTACCTATGTACCTGTTAC  
CACTTCAAAAATCTACAGACAGTCAATGTGGATGAGAACTAACCGCTGATCGTCAGATCAAATAAGTTATA  
AAAT

**13727.1**

TCGGGAGCCACACTGGCCCTTCCCTCCAAAGSGCCAGAACCTCCTCTTTGGAGAATGGGGAGGC  
CTCTGGAGACACAGAGGGTTCACCTGGATGACCTCTAGAGAAATTGCCAAGAACGCCACCTCTGGT  
CCCAACCTGCAGACCCCACAGCAGTCAGTGGTCAGGCCCTGCTGTAGAAGGTACTGGCTCCATTGCC  
TGCTTCCAACCAATGGGCAGGAGAGAAGGCCTTATTCCTGCCACCCATTCCCTGTACCAGCACCTC  
CGTTTCAGTCAGTGTGTCAGCAACGGTACCGTTACACAGTCACCTCAGACACACCATTCACCTCCCT  
TGCCAAGCTGTTAGCCTAGAGTGATTGAGTCAGTGAACACTGTTACACACCGTGAATCCATTCCATCAGTCC  
ATTCCAGTTGGCACCAGCCTGAACCATTGGTACCTGGTAACTGGAGTCCTGTTACAAGGTGGAGTC  
GGGGCTTGCTGACTTCTCTTCATTGAGGGCAC

**13727.2**

ACCTAGACAGAAGGTGGGTGAGGGAGGACTGGTAGGAGGCTGAGGCAATTCTGGTAGTTGCTCTGAA  
ACCCTACTGGAGAAGTCAGCATGAGGCACCTACTGAGAGAAGTGCCAGAAACTGCTGACTGCATCTGTTA  
AGAGTTAACAGTAAAGAGGTAGAAGTGTGTTCTGAATCAGAGTGGAAAGCGTCTCAAGGGTCCCACAGTGG  
AGGTCCCTGAGCTACCTCCCTCGTGAGTGGGAAGAGTGAAGCCATGAAGAACTGAGATGAAGCAAGG  
ATGGGGTCTGGCTCCAGGCAAGGGCTGTGCTCTGCAGCAGGGAGCCCCACGAGTCAGAAGAAAA  
GAACTAATCATTGTTGCAAGAACCTGCCGGATACTAGCGAAAACGGAGGCGGNGGTGGGGCAC  
AGGAAAGTGGAGTGATTGAGAGCAGAGAACGCTATGCACAGTGGCCAGTCCACTTGTAAAGTG

**13728.1&2**

TTCAAGCAATTGTAACAAGTATATGAGATTAGAGTGAGCAAAATCATATACAATTTCATTCCAGTTGCTAT  
TTTCAAATTGTTCTGTAATGTCGTTAAAATTACTAAAAATTAAACAAAGCCAAAATTATATTATGACAAGA  
AAGCCATCCCTACATTAATCTTACTTTCACTCACCAGGCCATCTCCTCTCTTCTTAACATGCCAT  
AAAAACTGTTACTGGGCCGGCGTGTGGCTATGCCTGTAATCCCAGCATTGGAGGCCAGGCAG  
GCGGATCATGAGGTCAAGAGATTGAGACCATCTGGCAACATGGTGAACACCCGCCCTGACTAAGAATAC  
AAAAATTAGCTGGCATGGTGGCGATGCCTGAGCTACTCGGGAGGCTGAGGCAGAAGAATCG  
CTTGACCCGGGAGGCAGAGGATGCAGTGAGCCCCGATCGCGCCACTGCACTCTAGCCTGGCGACAGA  
CTGAGACTCTGCTC

**13731.1&2**

TGTGCCAGTCTACAGGCCTATCAGCAGCGACTCCTCAGCAACAGATGGGGTCCCTGTTAGCCCAACC  
CCATGAGCCCCCAGCAGCATATGCTCCAAATCAGGCCAGTCCCCACACCTACAAGGCCAGCAGATCCC  
TAATTCTCTCCAATCAAGTGCCTCTCCCCAGCCTGTCCTCTCCACGCCAGTCCCAGCCCCCCC  
ACTCCAGTCCTCCCCAAGGATGCAGCCTCAGCCTCTCCACACCACGTTCCCCACAGACAAGTCCCCA  
CATCCTGGACTGGTAGTTGCCAGGCCAACCCATGGAACAAGGCATTTGCCAGCC

**13734.1&2**

TGTAAAAACTGTTTAATTTGTATAAATAAGGTGGCCATGCCACGGGGCTGTAGGAAATCCAAG  
CAGACCAGCTGGGTGGGGGATGTAGCCTACCTCGGGGACTGTCTGTCTCAAAACGGGCTGAGAAG  
GCCCGTCAGGGGCCAGGTCCCACAGAGAGGCCTGGATACTCCCCAACCGAGGGCAGACTGGCA  
GTGGGGAGCCCCATCGTCCCCAGAGGTGGCACAGGCTGAAGGAGGGCCTGAGGCACCGCAGCCT  
GCAACCCCCAGGGCTGCAGTCCACTAATTACAGAATAAAAGGAACATGGGATGGGAAAAAGCAC  
CAGGTAGGCAGGGCCCAGGGCCCCAGATCCCAGGAGGGCAGGACTCAGGATGCCAGCACCACCTA  
GCAGCTCCCACAGCTCCTGGCACAGGAGGCCACGGATTGGCACAGGCCGCTGGCATCAGCC  
ACATTGGAGAACCTGTCCGACAGAGGTAGCTCGGAGGACTCCTCGTGGCACACACTGTACGAACA  
CAGATCTCCTGTTAATGACGTACACACGGCGAGGCTGCCGGACAGGGCACGGAGGTCTCAGCCCC  
ACTT

**13736.2**

ATGGCTGCTGGATTAGGTGGTAATAGGGCTGTGGCCATAAATCTGAAGCCTGAGAACCTGGCTG  
GAGAGCCATGAAGAGGGAAAGGAAAAGAGGGCAAGTCCTGAACCTAACCAATGACCTGATGGATTGCTGA  
CCAAGACACAGAAGTGAAGTCTGTGTGCCTTCCCACAGACTGGAGTTTGGTGTGAATAGAGCC  
AGTGCTAAAAATTGGGGTTGGTAAGAAATCTGATTGTTGTGTATTCAATGTGTGATTAAATAA  
AACAGCAACAACAATAAAACCCCTGACTGGCTGTTTCCCTGTATTCTAACACTATTTTGACCCCT  
GAAAATTATTATACCTCACCTAAATGGAAGACTGCTGTGTTGTGAAATTGTAATTTTAATTATT  
TCTCTCTCCTTTATTTGCCTGCAGAATCCGTTGAGAGACTAATAAGGCTTAATTGATTGTTA  
ATATGTATATAAAT

**13744.2-13696.2**

GGCATGCGAGCGCACTCGCGGACGCAAGGGCGGGAGCACCGGACACTGCAGGCCGGTT  
GGGACAGCGTCTCGCTGCTGGTAGTCGTGTTTGGGATCGAGGAACTCACCAGAAACCGAAA  
ATGCCGAAACCAATCAATGTCGAGTTACCAACCATGGATGCAGAGCTGGAGTTGCAATCCAGCAAATAC  
AACTGGAAAACAGCTTTGATCAGGTGGTAAAGACTATCGGCCTCGGGAAAGTGTGGTACTTGGCCTCC  
ACTATGTGGATAATAAAGGATTCTACCTGGCTGAAGCTGGATAAGAAGGTGTCTGCCAGGAGGTAGG  
AAGGAGAATCCCCTCCAGTTCAAGTCCGGGCCAAaGTTCTACCTGAAGATGTGGCTGAGGAGCTCATCC  
AGGACATACCCAGAAACTTCTCCTCAAGTGAAGGAAGGAATCCTAGCGATGAGATCTACTGCC  
CTTGARACTGCCGTGCTTGGGCTACGCTGTGCATGCCAGTTGGGACTACCACCAAGAAG

**13746.1&2-13720.1&2**

GAAGGAGTCGGGACTCAGCATTGATGCACCCCAATTCAAAGCGGCATTCTCGGCAGGTCTCTGGGAC  
AATCTCTAGGGTCACTACCTGGAAACTCGTTAGGGTACAACGTGAATGCTGAAAGGAAGAACACCTGCAGA  
ACCGGACAGAAATTCAACCCGGCGATCAGCTGATTGATCTCGGTGACCAGAAGTCATGGCTAAAGATGAC  
GAGGACGTTGTCATTCCCTGGGTTTCAAGTGAAGTCAAGCTGGCTCCAGGTGCCAGCCTTATCTACATTCTCAGGGCTG  
GCACCTGGGACCAACAGCAGCTCCGGGGCCAGGTGCCAGCCTTATCTACATTCTCAGGGCTG  
ATCAAAGTTCACTGGTACACCAGGGACGGTACCCAGCGTCAGGTTGTCAGGTTGTCAGGTTGTCAGGATTGGTC  
GCCGGGACCAAGGGAAAGCCGCCACAGTTGGAGACCTGCGGATGCCACAGCCACAGAGGGGTGGTC  
CCCACCGCGGCCGGCACCCCGCGCGGGTCCAGCAACGGTGGGCGAGGGCCTCGTTCT  
TCCCTTGTCGCCATTGCTGCTCCAGAGGACGAAGCCGCAGGCCACAGAGCGTCAGGATTAGCAC  
CTTCCGTTGTAGATGCCAACCTCATGGCTCCAGGGCGGGAGCGCAGCTACAGCTCGAGCGTCCG  
CCGCCGCTAGGAGCCGGCTCGCTCCGCTCCATTCAAGCACCACGGTCCGGAAAAAG  
CTCAGCCSCGGTCCCAACCGCACCCAGCTTACCTCGTTACCTCGCCTCGCTT

**14347.1**

CAGATTTTATTGCAGTCGCACTGGGCCGTTCTGCTGCTTATTGTCTGCTAGCCTGCTCTCCAGC  
TGCATGGCCAGGCAGGCCTGATGACATCTCGCAGGGCTGAGAAATGCTGGCTGCTGGCCAGAG  
CAGATTCCGCTTGTTACAAAGGTCTCCAGGTATAGTCTGGCTGCTGGCATCTCAGAGAGCTCAAGC  
CAGTCTGGCCTTGCTGTATGATCTCCTGAGCTCTCCATAGCCTCTCCTCCAGCTCCCTGATCTGAGTC  
ATGGCTTCGTTAAAGCTGGACATCTGGGAAGACAGTCCTCCCTCCTGGATAAATTGCCTGGAATCAGC  
GCCCGTTAGAGCAGGCTCCATCTCTGTTCCATTGAATCAACTGCTCTCCACTGGGCCACTGTG  
GGGGCTCAGCTCCTGACCCTGCTGCATATCTTAAGGGTGTAAAGGATATTACAGGAGCTATGCCTG  
GT

**14347.2**

CTCCTCTGGTACATGAACCCAAGTTGAAAGTGGACTTAACAAAGTATCTGGAGAACCAAGCATTGCTTT  
GACTTGCATTGATGAAACAGCTCGAATGAAGTTGTCTACAGGTTCACAGCAAGGCCACTGGTACAGACA  
ATCTTGAAGGTGGAAAAGCAACTTGTTCATATGGCCAGACAGGAAGTGGCAAGACACATACTATGGG  
CGGAGACCTCTGGAAAGCCCAGAATGCATCCAAGGGATCTATGCCATGGCCTCCGGGACGTCTC  
TTCTGAAGAATCAACCCCTGCTACCGGAAGTGGGCTGGAAGTCTATGTGACATTCTCGAGATCTAACATG  
GGAAGCTGTTGACCTGCTCAACAAGAAGGCCAAGCTGCGCGTGTGGAGACGGCAAGCAACAGGTGC  
AAGTGGGGGGCTGCAGGAACATCTGGNTAACTCTGCTTGATGGCANTCAAGATGATCGACATGG  
GCAGCGCCTGCAGA

**14348.2&14350.1&2**

TCCCAGATTCAAGCGACAAATTGGAWAGTGAATGGAAGATGCCTATCATGAACATCAGGCAAATCTTTG  
CGCCAAGATCTGATGAGACGACAGGAAGAATTAAGACGCATGGAAGAACTTCACAATCAAGAAATGCAGAA  
ACGTAAGAAATGCAATTGAGGCAAGAGGGAGGAACGACGTAGAAGAGAGGAAGAGATGATGATTGTC  
CGTGAGATGGAAGAACAAATGAGGCGCCAAAGAGAGAGGAAGTTACAGCCGAATGGGCTACATGGATCCAC  
GGGAAAGAGACATGCGAATGGTGGCGGAGGAGCAATGAACATGGGAGATCCCTATGGTTCAGGAGGCC  
AGAAATTCCACCTCTAGGAGGTGGTGGCATAGGTTATGAAGCTAACCTGGCGTTCCACCAGCAACC  
ATGAGTGGTCCATGATGGGAAGTGACATGCGTACTGAGCGCTTGGCAGGGAGGTGCGGGGCCTGTG  
GGTGGACAGGGCTTAGAGGAATGGGCCTGGAACTCCAGCAGGATATGGTAGAGGGAGAGAAGAGTAC  
GAAGGC

**14349.1&2**

TTCGTGAAGACCCTGACTGGTAAGACCATCACTCTCGAAGTGGAGGCCGAGTGACACCATTGAGAATGTCA  
AGGCAAAGATCCAAGACAAGGAAGGCATCCCTCCTGACCAGCAKAGGTTGATCTTGCTGGAAACAGCTG  
GAAGATGGACGCACCCCTGTCTGACTACAACATCCAGAAAGAGTCCACCCCTGCACCTGGTGTCCGTCTCAG  
AGGTGGGATGCAAATCTCGTGAAGACCCCTGACTGGTAAGACCATCACCCCTGAGGGTGGAGGCCAGTGAC  
ACCATCGAGAATGTCAAGGCAAAGATCCAAGATAAGGAAGGCATCCCTCCTGATCAGCAGAGGTTGATCTT  
TGCTGGAAACAGCTGGAGATGGACGCACCCCTGTCTGACTACAACATCCAGAAAGAGTCCACTTGCAC  
TGGCCTGCGCTTGAGGGGGGTGCTAAGTTCCCCTTAAGGTTCAACAAATTCAATTGCACTTCC  
TTCAATAAGTTGTCATT

**14352.1&2**

GCGCGGGTGCCTGGGCCACTGGGTGACCGACTAGCCTGGCCAGACTCTCAGCACCTGGAAGCGCCCCG  
AGAGTGACAGCGTGAGGCTGGGAGGGAGCTGGCTTGAGCTTAAACTCTGCTCTGAGCCTCCTG  
TCGCCTGCATTTAGATGGCTCCCGCAAAGAAGGGTGGCGAGAAGAAAAAGGGCCCTGCCATCAACGA  
AGTGGTAACCCGAGAATAACCATCAACATTACAAGCGCATCCATGGAGTGGGCTCAAGAACGCGTGCAC  
CTCGGGCACTCAAAGAGATTGGAAATTGCCATGAAGGAGATGGGAACCTCCAGATGTGCGCATTGACACC  
AGGCTAACAAAGCTGTCTGGGCCAAGGAATAAGGAATGTGCCATACCGAATCCGTGTGCGGCTGTCCA  
GAAAACGTAATGAGGATGAAGATTACCAAAATAAGCTATATACCTTGGTACCTATGTACCTGTTACCACTT  
CAAAAATCTACAGACAGTCATGTGGATGAGAACTAACGCTGATCGT

**14353.1**

AATTCTTATTAAATCAACAAACTCATCTTCCTCAAGCCCCAGACCATGGTAGGCAGCCCTCCCTCTCCAT  
CCCCTCACCCACCCCTAGCCACAGTGAAGGAAATGGAAAATGAGAACGCCACGAGGGCCCTGCCAGG  
GAAGGCTGCCCAAGATGTGTGGTGGCACAGTCAGTCAGCTGTGGCTGGGCAGCAGCTGCCACAGGC  
TCCTCCCTATAAATTAAAGTTCCCTGCAGCCACAGCTGTGGAGAACGATACTGTAGAACGCAAGGCCAGTCC  
AGCATCAGAACGGCAGAGGCAGCATCAGTGAECTCCAGCCATGGAATGAACGGAGGACACAGAGCTCAGAG  
ACAGAACAGGCCAGGGGAAGAAGGAGAGACAGAACAGGCCAGGGCATGGCGGTGAGGGA

**14353.2**

TGATGAATCTGGGTGGCAGTAGCCCCAGATGATGGCTCTCTGGGGATCCCACTGGTCCC  
TAAGAAATCCAAGGAGAACCTCGGAACCTCTCGGATAACCAGCTGCAAGAGGGCAAGAACGTGATGGGT  
TACAGATGGCACCAACCGCGGGCGTCTCANGCAGGCATGACTGGCTACGGATGCCACGCCAGATCC  
TCTGATCCCACCCAGGCCTGCCCCTGCCCTCCCACGAATGGTTAATATATATGTAGATATATATTTAGC  
AGTGACATTCCCAGAGAGCCCCAGAGCTCTCAAGCTCCTTCTGTCAAGGGTGGGGTTCAAGCCTGTCC  
TGTCACCTCTGAAGTGCCTGCTGGCATCCTCTCCCCATGCTTACTAACATTCCCTCCCCATGCC

**17182.1&2**

AGCGGAGCTCCCTCCCTGGTGGTACAACCCACACGCCAGGCTCAGGCATCGAGCAGAACTCCAGC  
GACTGGTAACCACTGACATTCAAGGTGAAGGTGGGACACCTACCTGGATACACAGGTGGTGGGACAGA  
CAGGTGTCACTCCGCAGTGTCACTGGGAGGCATGTGCTCTGTGTACCTGAAGGACAGTGAGAACGGTTGTCAG  
CATTTCAGTGAGCACCTGGAGCCTATCACCCCCACCAAGAACACAAGGTGAAAGTGATCCTGGCGAG  
GATCGGGAAAGCCACGGCGTCTACTGAGCATTGATGGTGGAGGATGGCATTGTCCGTATGGACCTGATG  
AGCAGCTCAAGATCCTCAACCTCCGCTTCCGGAAAGCTCCTGGAAAGCCTGAAGCAGGCAGGGCCGGTG  
GACTTCGTCGGATGAAGAGTGATCCTCCTCCCTGGCTGTGACACAAGATCCTCCTGCAG  
GGCTAGGCAGGATTGTTCTGGATTTCTTTGTTAGGTTCCATTTCCCTCCCTGGTGTCA  
TTGGAATCTGAGTAGAGTCTGGGGAGGGTCCCCACCTCCTGTACCTCCTCCCCACAGCTGTTGGTCTA  
GTACCGTCTTCAATAAAAGAAGCTGTTGGTCTA

**17183.2**

GGTCACAGCACTGCTGTTGTGCCGGCCAGGAATTCCAGGCTACAAGGCTATCTAGCAGCTCG  
TTCTCCGGTTTACTGCCATGTTAACATGAAATGGAGGAGAGCAAAAAGAATCGAGTGAAATCAATGA  
TGTGGAGCCTGAAGTTTAAGGAAATGATGTGCTCATTACACGGGGAGGCTCCAACCTCGACAAAAT  
GGCTGATGATTGCTGGCAGCTGCTGACAAGTATGCCCTGGAGCGCTAAAGGTATGTGAGGATGCC  
CTCTGCAGTAACCTGTCCGTGGAGAACGCTGCAGAAATTCTCATCCTGGCCGACCTCACAGTCAGATCA  
GTTGAAAACTCAGGCAGTGGATTCATCAACTATCATGCTCGGATGTCTGGAGACCTCTGGG

**17186.1&2**

TCGTAGCCATTTCTGCTTGGAGAACGCCCCACTGACTGCTCATTGTCGTTGGTCCATGCCAA  
TTGGTAAATAGAACCTCATCCGGTAGTGGAGCCGGAGGGACATCTGTCATCAACGGTGATGGTGC  
TGGAGCATACCAGAGCTTGGTCTGCCATACAGGGCAAAGAGGTTGTGACAAAGAGGAGAGATACGG  
CATGCCTGTGCAGCCCTGATGCACAGTCCCTGCTGTACTCTCCACTGCCAGCCGGAGGGCTCCC  
TGTCCGACAGATAGAACGATCACTCCACCCCTGGCTTG

**17187.1&2**

TGGCACACTGCTTAAGAAACTATGAWGATCTGAGATTGTTGTATGTTTGACTCTTGAGTGGTA  
ATCATATGTGCTTTAGATGTACATACCTCCTGCACAAATGGAGGGAAATTCACTTCACTGGGAGT  
GTCCTAGTGATAAAACCATGCTGGTATGGCTCAAGTTGAAAAATGAAAGTGA  
CTTAAAAGAAAAT  
AGGGGATGGTCCAGGATCTCCACTGATAAGACTGTTTAAGTAACCTAAGGACCTTGGGTCTACAAGTAT  
ATGTGAAAAAAATGAGACTTACTGGGTGAGGAATTCAATTGTTAAAGATGGCGTGTGTGTGT  
GTGTGTGTTGTGTTGTTGTTAAGGGAGGGAAATTATTACCGTTGCTGAAATTACTGKGTA  
AATATGTYTGATAATGATTGCTYTTGVCMACTAAAATTAGGVCTGTATAAGTWCTARATGCMTC  
GGKGTTGATYTCCMAGATATTGATGATAMCCCTAAAATTGTAACCYGCCTTCCCTTGCTYTCMATT  
AAGTCTATTCAAAG

**17191.1&89.1**

GGGGTAGGCTTTATTAGACGGTATTGCTGTACTACAGGGCAGAGTCAGTGTAAGCAGTGT  
CAGAG  
GCCCGCGTTCAAGCCAAAGAACATGTGGATTCTCTCCCTATTGATCACAGTGGTGGTTCTCAGAAAAG  
CCCCAGAGGCAGGGACCAGTGAGCTCCAAGGTTAGAAGTGGAACTGGAAGGCTCAGTCACATGCT  
CCACGCTCCAGGCTGGCAGCAAGGAGGAGATGCCATGACGTGCCAGGTCTCCCATCTGACACCAGT  
GAAGTCTGGTAGGACAGCAGCCGCACGCCCTGCCAGGAGGCCAATCATGGTAGGCAGCATTGAG  
GGTCAGAGGTCTGAGTCGGAATAGGAGCAGGGCAGGCTCGGGAGAGGCAGTCTGGCTGAAGA  
CAGCTCCATTGAGCCCCCTGCAGTACAGGYGTAGTGCCTGGACCAAGCCCACAGCCTGGTAAGGGCG  
GCCAGGGCCACGGCCAGGAGGCA

**17192.1&2**

TAATTCTTAGTCGTTGGAATCCTTAAGCATGC<sub>AAAAGCTT</sub>GAACAGAAGGGTCACAAAGGAACCAGGG  
TTGTCTTATGGCATCCAGTTAACGCCAGAGCTGGGAATGCCCTGGGTATCCACATCAGGAGCAGAACAC  
TTGACTTGTGGTCCTGCTGCCACGGTTGGCGCCCACCACGCCACGTCACCTCGTCCTCCCTGCC  
GCCACGTCCGGGCCAAGGTCTCCAAAATTGATCTCAGCTGAGACGTTATATCATTGCTGGCTTCC  
GGAAATGATGGTCCATAACCGAATCTTCAGCATGAGCCTCTTCACTTTGATTATGAAGAACAAATCCCTT  
CTTCCACTGCCCATCAGCACCTCATTGGTTTGGATTTAAATTCTACTTTGCCGGTCCTATTGTA  
ATAGCCTTCACTCATCCAAAGTCATCTCTTGGACCCTCCTCTTACCTCTTCAACTCATTCTCCTTATT  
TTCAGTGTCTGCCACTGGATGATGTTCTCACCTCAGGTGTTCTCAGTCACATTGATTGATCCAAGTCA  
GTTAATTGTCTTGACAGTCCCCAGTTGAGATCCGCTACCTCACGTTGTCCTCGTGCCTCAGGCCA  
GATCTATCACTCCACTATGCCATCAAATTACGTTGCCACGAGAACAAATCCATCTCCTCGGCCATT  
CCACGTCCACGGCCCCCTGACCTCTTCAAGACCACGACCTCGAATAGGTGGTCAATAATCGGTCT  
ATCAACTGAAAATTGCCCTCTTCAACCCTTCTCAAGTGGCTTCAATCTCGTTCACGAGGTGGTGC  
CCTTCTGGTCTTCAATTATTCCCTCACCTGAAGTTGATCAGGTCTTCCAACTCGTGC

**17193**

AAGCGGATGGACCTGAGTCAGCCGAATCCTAGCCCCTCCCTGGGCCTGCTGTGGTGCTCGACATCAGT  
GACAGACGGAAGCAGCAGACCATCAAGGCTACGGGAGGCCGGCGCTGCGAACAGATGAAGTTGGCT  
GCCCTCTCCTCCGGCAGCCTTATGCTGGCTTGTCTTAAATTGAATCAAGACTGTGGAGACGCCGCTGGCGT  
CCTCTGCTGAGCAGCCAGCGGAACCTGACCATGCCGTCCACATTGCTCACAGGGACTGGGAAGGCGATG  
CCTGTCGGGAGCTGCTGGAGAGACTCGGGATGACTCCTGCTCAGATTGACATTGGGAAACTTGC  
AATGCCCGAACAGACGAGCTGAGGTTGGAAGTCAAGCTGCACTGACCAACCTGAAGCAGAACAGTACCTGAC  
TTAAGTCCGATGAGGTTGGAAGTCAAGCTGCACTGACCAACCTGAAGCAGAACAGTACCTGAC  
TGTGATTCAAACCCCAGGTGGTTACTGGAGCCCACCTAGGAAAGGAGGCAAGGATGTATTCCAGGTAG  
ACATCCCAGAGCACCTGATCCCTTGGGCATGAAGTGTGACAAGTGTGGCTCTGAAAGGAATGTTCCR  
GAGAAACCAGCTAAATCATGGCACCTCAATTGCCATCGTGACGCAGACCTGTATAAAATTAGGTTAAAGAT  
GAATTCCACTGCTTGGAGAGTCCCACCCACTAAGCACTGTGCATGTAAACAGGTTCTTGCTCAGATGA  
AGGAAGTAGGGGTGGGCTTCTGTGATGCCTCCTAGGCACACAGGCAATGTCTCAAGTACTTG  
ACCTTAGGGTAGAAGGCAAAGCTGCCAGTAAATGTCTCAGCATTGCTGCTAATTGGCCTGCTAGTTCT  
GGATTGTACAAATAATGTGTTGAGATGA

*Fig. 15U*

**16443.1.edit**

TCGAGCGGCCGCCGGCAGGTGTCGGAGTCCAGCACGGGAGGCCTGGCTTAGTTGTTCTCCGGCT  
GCCCATTGCTCTCCACTCCACGGCGATTCGCTGGATAGAACCTTGACCAGGCAGGTCAAGGCTGAC  
CTGGTTCTGGTCATCTCCTCCCAGGATGGGGCAGGGTGTACACCTGTGGTTCTGGGGCTGCCCTTG  
GCTTGGAGATGGTTCTCGATGGGGCTGGGAGGGCTTGTGGAGACCTGCACTGTACTCCTGCC  
ATTCAACCAGTCTGGTGCANGACGGTGAGGACGCTNACCACACGGTACNGCTGGTACTGCTCCTCC  
CGCGGCTTGTCTGGCATTATGCACCTCACGCCGTACGTACCAATTGAACCTGACCTCAGGGTCTTC  
GTGGCTACGTCCACCACCGATGTAACCTCAAANCTCGNCGANCACGC

**16443.2.edit**

AGCGTGGTCGCGGCCGAGGTCTGAGGTTACATGCGTGGTGGACGTGAGCCACGAAGACCCCTGAGGT  
CAAGTTCAACTGGTACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAAGCCGGGAGGAGCAGTAC  
AACAGCACGTACCGTGTGGTCAGCGTCCTCACCGTCTGCACCAGGACTGGCTGAATGGCAAGGAGTACA  
AGTGCAAGGTCTCCAACAAAGCCCTCCAGCCCCATCGAGAAAACCCTCCAAGCCAAGGGCAGCC  
CCGAGAACACAGGTGTACACCTGCCCATCCGGGAGGAGATGACCAAGAACAGGTCAAGCCTGACC  
TGCCTGGTCAAAGGCTTCTATCCAGCGACATGCCGTGGAGTGGAGAGCAATGGCAGCCGGAGAA  
CAACTACAAGACCAACGCCCTCCGTGCTGGACTCCGACACCTGCCGGCGCGCTCGA

**16444.2.edit**

AGCGTGGTNCGGCCGAGGTCCAACCAAGGCTGCANCTGGATGCCATCAAAGTCTTCTGCAACATGGA  
GACTGGTGAGACCTGCGTGTACCCACTCAGCCCAGTGTGGCCCAGAAGAACTGGTACATCAGCAAGAAC  
CCCAAGGACAAGAGGCATGTCTGGTCGGCGAGAGCATGACCGATGGATTCCAGTTGAGTATGGCGGCC  
AGGGCTCCGACCCCTGCCGATGTGGACCTGCCCGGGCGNCGCTCGA

**16445.1.edit**

AGCGTGGTCGCGGCCGAGGTCAAGAACCCGCCGCACCTGCCGTGACCTCAAGATGTGCCACTCTGACT  
GGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAAC  
ATGGAGACTGGTGAGACCTGCGTGTACCCACTCAGCCCAGTGTGGCCCAGAAGAACTGGTACATCAGCA  
AGAACCCCAAGGACAAGAGGCATGTCTGGTCGGCGAGAGCATGACCGATGGATTCCAGTTGAGTATGG  
CGGCCAGGGCTCCGACCCCTGCCGATGTGGACCTGCCCGGGCGGCCGCTCGA

**16445.2.edit**

TCGAGCGGTGCCCCGGGCAGGTCCACATCGGCAGGGTGGAGGCCACTCGAACCTGGAAT  
CCATCGGNCATGCTCTGCCGAACCAGACATGCCTCTGNCCCTGGGTTCTGCTGATGTACCAGNTCTT  
CTGGGCCACACTGGGCTGAGTGGGTACACGCAGGTCTACCANTCTCCATGTTGCANAAGACTTGATG  
GCATCCAGGTTGCAGCCTGGTGGGTCAATCCAGTACTCTCCACTCTTCAGACAGAGTGGCACATCTT  
GAGGTCACGGCAGGTGCGGGCGGGTTCTGACCTCGTCGCGACCACGCT

**16446.1.edit**

TCGAGCGGCCGCCCCGGCAGGTCCCTCAGAGCGGTAGCTGTTCTATTGCCCGGCAGCCTCCATAGA  
TNAAGTTATTGCANGAGTTCTCCACGTCAAAGTACCAAGCGTGGGAAGGATGCACGGCAAGGCCAGT  
GACTGCGTTGGCGGTGCAGTATTCTCATAGTTGAACATATCGCTGGAGTGGACTTCAGAATCCTGCCTCT  
GGGAGCACTGGGACAGAGGAATCCGCTGCATTCTGCTGGTGGACCTCGGCCGCGACCACGCT

**16446.2.edit**

AGCGTGGTCGCGGCCGAGGTCCACCAGCAGGAATGCAGCGGATT CCTCTGTCCCCAAGTGCTCCCAGAAG  
GCAGGATTCTGAAGACCCTCCAGCGATATGTTCAACTATGAAGAAACTGCACCGCCAACGCAGTCAGT  
GGCCTTGCCGTGCATCCTCCCACGCTGGTACTTGACGTGGAGAGGAACTCCTGCAATAACTCATCTAT  
GGAGGCTGCCGGGCAATAAGAACAGCTACCGCTCTGAGGAGGACCTGCCCGGGCGCTCGA

**16447.1.edit**

TCGAGCGGCCGCCCCGGCAGGTCCACATCGGCAGGGTGGAGGCCACTCGAACCTGGAAT  
CCATCGGTATGCTCTGCCGAACCAGACATGCCTCTGTCCTGGGTTCTGCTGATGTACCAGTTCTT  
CTGGGCCACACTGGGCTGAGTGGGTACACGCAGGTCTACCAGTCTCCATGTTGCAGAAGACTTGATG  
GCATCCAGGTTGCAGCCTGGTGGGTCAATCCAGTACTCTCCACTCTTCAGCCAGAACATGGCACATCTT  
GAGGTCACGGCANGTGCAGGGCGGGTTCTGACCTCGGCCGCGACCACGCT

*Fig. 15W*

**16447.2.edit**

AGCGTGGTCGCGGCCGAGGTCAAGAAACCCCGCCCCCACCTGCCGTACCTCAAGATGTGCCACTCTGG  
CTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCA  
ACATGGAGACTGGTGAGACCTGCGTGTACCCCACTCAGCCCAGTGTGGCCCAGAAGAACTGGTACATCAG  
CAAGAACCCCAAGGCACAAGAGGCATGTCTGGCTGGCGAGAGCATGACCGATGGATTCCAGTCAGTAT  
GGCGGCCAGGGCTCCGACCTGCCATGTGGACCTGCCCGGGCGGCCGCTGA

**16449.1.edit**

AGCGTGGTCGCGGCCGAGGTCTGTCAAGTGGCACTGGTAGAAGNTCCAGGAACCCCTGAACGTAAAGG  
GTTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGTCTGNAATGGGGCCCATGAN  
ATGGTTGNCTGAGAGAGAGCTTCTGTCTACATTGGCGGGTATGGTCTTGCCTATGCCTTATGGGGGT  
GGCCGTTNGGGCGGTNGGTCCGCCTAAAACCATGTTCTCAAAGATCATTGTTGCCAACACTGGGTT  
GCTGACCANAAGTGCCAGGAAGCTGAATACCATTCCAGTGTCAACCCAGGGTGGTGACGAAAGGGGT  
CTTTGAACTGTGGAAGGAACATCCAAGATCTCTGNTCCATGAAGATTGGGTGTGGAAGGGTTACCAAGTT  
GGGGAAGCTCGCTGTCTTTCTCCAATCANGGGCTCGCTTCTGAATATTCTCAGGGCAATGACATA  
AATTGTATATTGGTTCCCGGTTCCAGGCCAG

**16450.1.edit**

TCGAGCGGCCGCCCCGGCAGGTCCACCACACCCATTCTGCTGGTATCATGGCAGCCGCCACGTGCCA  
GGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGTCTCCTCCCAGAGAAGTGGCCCTCGGCCCCG  
CCCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGGAACCGAATATAACATTATGTCATTGCC  
TGAAGAATAATCAGAAGAGCGAGCCCCTGATTGGAAGGAAAAGACAGACGAGCTCCCCAAGTGGTAACC  
CTTCCACACCCCAATCTCATGGACCAGAGATCTGGATGTTCTCCACAGTTCAAAGACCCCTTCGTC  
ACCCACCCCTGGTATGACACTGGAAATGGTATTCAAGCTTCTGGCACTTCTGGTCAAGAACCCAGTGG  
GCAACAAATGATCTTGANGAACATGGNTTAGGGGACCACACCGGCCACAACGGCACCCCCATAAGG  
CATAGGCCAAGAACATACCCGNCATGTAGGACAAGAAGCTNTCTCANACANCATCTCATGGGCC  
ATTCCANGACACTTCTGAGTACATCANTCATGGCATCCTGGTGGCACTGATAAAACCCCTACAGTTA

**16450.2.edit**

AGCGTGGTCGCGGCCGAGGTCTGTCAAGTGGCACTGGTAGAAGTTCCAGGAACCCCTGAACGTAAAGG  
GTTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGTCTGGAATGGGGCCCATGAN  
ATGGTTGTCTGAGAGAGAGCTTCTGTCTACATTGGCGGGTATGGTCTTGCCTATGCCTTATGGGGGT  
GGCCGTTGGCGGTGGTCCGCCTAAAACCATGTTCTCAAAGATCATTGTTGCCAACACTGGGTT  
GCTGACCAGAAGTGCCAGGAAGCTGAATACCATTCCAGTGTCAACCCAGGGTGGTGACGAAAGGGGT  
CTTTGAACTGTGGAAGGAACATCCAAGATCTCTGGTCCATGAAGATTGGGTGTGGAAGGGTTACCAAGTT  
GGGGAAGCTCGTGTCTTTCTCCAATCANGGGCTCGCTTCTGATTATTCTCAGGGCAATGACAT  
AAATTGTATATTGGNTCCGGTNAGCCAATAATAACCCCTGTGACACCANGCGGGCCGAAGG  
ANCACAT

**16451.1.edit**

AGCGTGGTCGCGGCCGAGGTCCCTACCAAGAGGTACCACCTACAACATCATAGTGGAGGCAGTGAAAGACC  
AGCAGAGGCATAAGGTCGGGAAGAGGTTACCGTGGCAACTCTGTCAACGAAGGCTTGAACCAACC  
TACGGATGACTCGTGTGCTTGACCCCTACACAGTTCCCATTATGCCGTTGGAGATGAGTGGAACGAATGT  
CTGAATCAGGCTTAAACTGTTGCCAGTGCTTANGCTTGGAAAGTGGTACATTCAAGATGTGATTCATCTA  
GATGGTGCCATGACAATGGTGTGAACATACAAGATTGGAGAGAAGTGGACCGTCAGGGAGAAAATGGACC  
TGCCCCGGCGGCCGCTCGA

**16451.2.edit**

TCGAGCGGCCGCGGCCGAGGTCCATTTCCTGACGGTCCCACCTCTCCAATCTTAGTTCACAC  
CATTGTCAATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCAAAGCCTAACGCACTGGCACAACA  
GTTAAAGCCTGATTCAAGACATTGTTCCACTCATCTCAACGGCATAATGGGAAACTGTGTAGGGTCAA  
AGCACGAGTCATCCGTAGGTTGGTCAAGCCTCGNTGACAGAGTTGCCACGGTAACAACCTCTTCCCAC  
ACCTTATGCCTCTGCTGGTCTTCAGTGCCTCCACTATGATGTTAGGTGGTACCTCTGGTGAGGACCTC  
GGCGCGACCACGCT

**16452.1.edit**

AGCGTGGCCGCGGCCGAGGTCCATTGGCTGGAACGGCATCAACTTGGAAAGCCAGTGATCGTCTAGCCTT  
GGTTCTCAGCTAATGGTATGGNGGTCTCAGTAGCATCTGTCACACGAGCCCTTCTGGTGGCTGACAT  
TCTCCAGAGTGGTGACAACACCCCTGAGCTGGTCTGCTGCAAAGTGTCTTAAGAGCATAGACACTCACT  
TCATATTTGGCGNCCACCATAAGTCCTGATACAACCACGGAATGACCTGTCAAGGAAC

**16452.2.edit**

TCGAGCGGCCGCGGCCGAGGTCCCTCAGACCGGGTTCTGAGTACACAGTCAGTGTGGTGCCTGCACGA  
TGATATGGAGAGGCCAGCCCCCTGATTGGAACCCAGTCCACAGCTATTCTGCACCAACTGACCTGAAGTTCA  
CTCAGGTACACCCACAAGCCTGAGCGCCCAGTGGACACCACCCAAATGTTCAGCTCACTGGATATCGAGT  
GCGGGTGACCCCCAAGGAGAAGACCGGACCAATGAAAGAAATCAACCTTGCTCTGACAGCTCATCCGTG  
GTTGTATCAGGACTTATGGCGGCCACCAAATATGAAGTGAGTGTCTATGCTCTTAAGGACACTTGACAAGC  
AGACCAGCTCAGGGTGGTGTCACTCTGGAGAAATGTCAAGCCCACCAAGAAGGGCTGTGACAGATG  
CTACTGAGACCACCATCACCATTAGCTGGAGAACCAAGACTGAGACGATCACTGGCTCCAAGTTGATGCC  
GTTCCAGCCAATGGACCTCGGCCGCGACCACGCTT

*Fig. 15Y*

**16453.1.edit**

AGCGTGGTCGCGGCCGAGGTCTGGCCGAACGCCAGTGTACAGGAAAGATGTACATGTTAGNTCTTCT  
CGAAGTCCCAGGCCAGCAGCTCCACGGGTGGTCTCCTGCCTCCAGGCCTCTCATTCTCATGGATCTT  
CTTCACCCGCAGCTCTGCTTCAGTCAGAAGGTTGTTGCCTCATCCCTCTCATACAGGGTGACCAGGA  
CGTTCTTGAGCCAGTCCCGCATGCGCAGGGGAATTGGTCAGCTCAGAGTCCAGGCAAGGGGGATGT  
ATTGCAAGGCCGATGTAGTCCAAGTGGAGCTTGTGGCCCTTGGTGCCTCAAGGTGCACTTGTG  
GCAAAGAAGTGGCAGGAAGAGTCGAAGGTCTTGTCAATTGCTGCACACCTCTCAAACCTGCCAATGGG  
GGCTGGCAGACCTGCCGGGGCGCCGCTCGA

**16453.2.edit**

TCGAGCGGCCGCCGGCAGGTCTGCCAGCCCCATTGGCGAGTTGAGAAGGNGTGCAGCAATGACA  
ACAAGACCTCGACTCTCCTGCCACTTCTTGCCACAAAGTGCACCCCTGGAGGGACCAAGAAGGCCAC  
AAGCTCCACCTGGACTACATCGGGCTTGCAAATACATCCCCCTTGCTGGACTCTGAGCTGACCGAATT  
CCCCCTGCGCATCGGGACTGGCTCAAGAACGTCCTGGTACCCCTGTATGAGAGGGATGAGGACAAC  
CTTCTGACTGAGAACGACAAGCTGCCGGTAAGAACATCCATGAGAACATGANAAGCGCCTGNAGGCANGAG  
ACCACCCGTGGAGCTGCTGCCGGACTTCGAGAACATAACATGTACATCTCCCTGTACACTGG  
CAGTCGCCAGACCTGCCGCGACCGCT

**16454.1.edit**

AGCGTGGNTGCGGACGACGCCACAAAGCCATTGTATGTAGTTANTTCAGCTGCAAANAAACCNCCAG  
CATCCACCTTAACCAGCATATGCAGACA

**16454.2.edit**

TCGAGCGGTGCCCCGGCAGGTCTGGCGGATAGCACCGGGCATATTTGGAATGGATGAGGTCTGGCA  
CCCTGAGCAGCCCAGCGAGGACTTGGTCTTAGTTGAGCAATTGGCTAGGAGGATAGTATGCAGCACGGT  
TCTGAGTCTGTGGATAGCTGCCATGAAGNAACCTGAAGGGAGGCGCTGGCTGGTANGGGTTGATTACAGG  
GCTGGGAACAGCTCGTACACTGCCATTCTCTGCATATACTGGNTAGTGAGGCGAGCCTGGCGCTCTTCTT  
TGCCTGAGCTAAAGCTACATACAATGGCTTGNGGACCTGCCGCGACCACGCTT

*Fig. 15Z*

**16455.1.edit**

TCGAGCGGCCGCCCCGGCAGGTCCATTCTCCCTGACGGTCCCACCTCTCCAATCTTAGTTCACAC  
CATTGTCATGACACCATCTAGATGAATCACATCTGAAATGACCACTTCAAAGCCTAAGCACTGGCACAACA  
GTTAAAGCCTGATTGACACATTGTTCCACTCATCTCAAACGGCATAATGGGAAACTGTGTAGGGTCAA  
AGCACGAGTCATCCGTAGGTTGGTCAAGCCTCGTTGACAGAAGTTGCCACGGTAACAAACCTCTCCCG  
AACCTTATGCCTCTGCTGGTCTTCAAGTGCCTCACTATGATGTTAGGTGGCACCTCTGGTAGGGACC  
TCGGCCGCGACCACGCT

**16455.2.edit**

AGCGTGGTTGCGGCCGAGGTCCACCANAGGTGCCACCTACAACATCATAGTGGAGGCAGTGAAAGAC  
CAGCAGAGGCATAAGGTCGGGAAGAGGTTGTTACCGTGGCAACTCTGTCAACGAAGGCTGAACCAAC  
CTACGGATGACTCGTGCTTGACCCCTACACAGNTCCCATTATGCCGTTGGAGATGAGTGGAACGAATG  
TCTGAATCAGGCTTAACTGTTGCCAGTGCTTANGCTTGGAAAGTGGTCATTCAGATGTGATTCATCT  
ANATGGTGTATGACAATGGTNGAAGTACAAGATTGGAGAGAAGTGGNACCGTCAGGGANAAAATGGA  
CCTGCCCGGGCGGCNCGCTGA

**16456.1.edit**

AGCGTGGTCGCGGCCGAGGTCTGGCTTNCTGCTCANGTATTATCCTGAACCATCCAGGCCAAATAAGCG  
CCGGCTATGCCCTGNATTGGATTGCCACACGGCTCACATTGCATGCAAGTTGCTGAGCTGAAGGAAAAG  
ATTGATC

**16456.2.edit**

TCGAGCGGCCGCCCCGGCAGGTCCAATTGAAACAAACAGTTCTGAGACCCTTCCACCACTGATTAAGA  
GTGGGGNGGCGGGTATTAGGGATAATATTCAATTAGCCTCTGAGCTTCTGGGCAGACTGGTGACCTTG  
CCAGCTCCAGCAGCCTCTGGTCCACTGCTTGATGACACCCCACCGCAACTGTCTGTCTCATATCACGAAC  
AGCAAAGCGACCCAAAGGTGGATAGTCTGAGAAGCTCTCAACACACATGGGCTGCCAGGAACCATATCAA  
CAATGGGCAGCATCACCAGACTCAAGAATTAAAGGGCCATCTTCAGCTTTACCAGAACGGCGATCAAT  
CTTTCCTCAGCTCAGCAAACCTGCATGCAATGTGAGCCG

*Fig. 15AA*

**16459.1.edit**

TCGAGCGGCCGCCGGCAGGTCCAGAGGGCTGTGCTGAAGTTGCTGCTGCCACTGGAGGCCACTCCAA  
TTGCTGGCCGCTTCACTCCTGGAACCTTCACTAACAGATCCAGGCAGCCTCCGGGAGGCCACGGCTTCTT  
GTGGNTACTGACCCCAGGGCTGACCACCAGCCTCTCACGGAGGCATCTTATGTTAACCTACCTACCATTGC  
GCTGTGTAACACAGATTCTCCTCTGCGCTATGTGGACATTGCCATCCCATGCAACAACAAGGGAGCTCACT  
CAGNGGGTTGATGTGGATGCTGGCTGGGAAGTTCTGCGCATGCGTGGCACCATTCCTGGAAC  
ACCCATGGGANGNCATGCCTGATCTGGACTTCTACAGAGATCCTGAAGAGATTGAAAAAGAAGAACAGGCT  
GNTTGCTGANAAAGCAAGTGACCAAGGANGAAATTCAAGGGTCAAANGGACTGCTCCGCTCTGAATT  
ACTGCTACTCAACCTGANGNTGCAGACTGGCTTGAAGGNGNACANGGCCCTGGGCCTATTAAGCA  
NCTCGGTCGCGAACACGNT

**16459.2.edit**

AGCGTGNNGTCGCGGCCGAGGTGCTGAATAGGCACAGAGGGCACCTGTACACCTCAGACCAGTCTGCAAC  
CTCAGGCTGAGTAGCAGTGAACTCAGGAGCAGCAGTCCATTCAACCTCAGGATCTGAGATCAGATCAGGCATG  
GCCTCTCAGCAGCAGCCTGCTCTTCAATCTCTCAGGATCTGAGATCAGATCAGGCATG  
ACCTCCATGGGTGTTCACGGAAATGGTGCCACGCATGCGCAGAACCTCCGAGGCCAGCATCCACCACA  
TCAAACCCACTGAGTGAGCTCCCTGTTGCATGGATGGCAATGTCACATAGCGCAGAGGAGAAC  
TGTGTTACACAGCGCAATGGTAGGTTAACATAAGATGCCTCCGCGAGAACGCTGGTGGTCAGCCCTG  
GGGTCAAGTAACCACAAGAACCGTGGCTCCCGAAGGCTGCCTGGATCTGGTTAGTGAAGGNTCCAGGA  
GTGAAGCGGCCAACAAATTGGAGTGGCTTCAGTGGCAAGCAGCAAACCTCAGCACACAAGCCCTGGACCTG  
CCCGCGGCCGCTCGA

**16460.1.edit**

TCGAGCGGCCGCCGGCAGGTCCATTCTCCCTGACGGNCCACTTCTCCAATCTTAGTTCACAC  
CATTGTATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCAAAGCCTAACGCACTGGCACAACA  
GTTAAAGCCTGATTGACACATTGTTCCACTCATCTCAACGGCATAATGGAAACTGTGAGGGTCAA  
AGCACGAGTCATCCGTAGGTTGGTCAAGCCTCGTTGACAGAGTTGCCACGGTAACAACCTNTCCCCG  
AACCTTATGCCTCTGCTGGCTTCAGNGCTCCACTATGATGNTGAGGGGGCACCTCTGGNGANGAC  
CTCGGCCGCGACCACGCT

**16460.2.edit**

AGCGTGGTCGCGGCCGAGGTCTCACAGAGGTGCCACCTACAACATCATAGTGGAGGCAGTAAAGACC  
AGCAGAGGCATAAGGCTGGGAAGAGGTTTACCGTGGCAACTCTGTCAACGAAGGCTGAACCAACC  
TACGGATGACTCGTGTGCTTGACCCCTACACAGTTCCCTATTGCGTTGGAGATGAGTGGGAACGAATGT  
CTGAATCAGGCTTAAACTGTTGCCAGTGCTTANGCTTGAAGTGGTCATTTCAGATGTGATTCT  
AGATGGTGCATGACAATGGNGNGAACTACAAGATTGGAGAGAAGTGGNACCGNCAGGGAGAAAATGGAC  
CTGCCCGGGCGGCCGCTCGA

*Fig. 15BB*

**16461.1.edit**

AGCGTGGTCGCGGCCGAGGTCCACATCGGCAGGGCGGCCACTCGAATGGAACTGGATCC  
ATCGGTATGCTCTGCCGAACCAGACATGCCCTTGCTCCTGGGTTCTGCTGATGTACCAAGTCTCTG  
GGCCACACTGGGCTGAGTGGGTACACGCAGGTCTCACCAGTCTCCATGTTGCAGAAGACTTGATGGCA  
TCCAGGNTGCAACCTTGGTGGGNTCAATCCAGTACTCTCCACTCTCCAGGCCAGAGTGGCACATCTGAG  
GTCACGGCAGGTGCGGNCGGGNTTGCAGCTGCCCTGGNCTCGGNTGNCTCNATCTGCTGGC  
TCA

**16461.2.edit**

TCGAGCGGCCGCCGGCAGGTCTCGCGTCGCACTGGTATGCTGGCCTGTTGGCCCCGGCCCT  
CCTGGACCTCCTGGCCCCCTGGCCTCCCAGCGCTGGTTGACTTCAGCTCCTGCCAGCCACCTC  
AAGAGAAGGCTACGATGGTGGCCGCTACTACCGGGCTGATGATGCCAATGTGGTCTGTGACCGTGACCT  
CGAGGTGGACACCACCCCTCAAGAGCCTGAGCCAGCAGATCGAGAACATCCGGAGCCCAGAGGGCAGNCG  
CAAGAACCCCGCCCGCACCTGCCGTGACCTCAAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGG  
ATTGACCCCAACCAAGCTGCAACCTGGATGCCATCAAAGTCTCTGCAACATGGAGACTGGTGAGACCTGC  
GTGTACCCCACTAGCCCAGTGTGGCCAAAAGAACATGGTACATCAGCAAGAACCCCAAGGACAAGAAC  
ATGTCTGGTTCGGCGAGAACATGACCGATGGATTCCAGTCAGTATGGCGGGCAGGGCTCCGACCCCTGC  
CGATGGGACCTTGGCCGCAACACGCT

**16463.1.edit**

AGCGTGNNGCGGCCGAGGTATAATATCCAGNCCATATCCTCCCTCACAGCTGANAGATGAAGCTGT  
NCAAAGATCTCAGGGTGGANAAAACCAT

**16463.2.edit**

TCGAGCGGCCGCCGGCAGGTCTTCAGACTGGACTGTGTCACACTGCCAGGCTCCAGGGCTCCAAC  
TTGCAGACGGCCTGTTGGACAGTCTCTGTAATCGCGAAAGCAACCATGGAAGACCTGGGGAAAACA  
CCATGGTTTATCCACCCCTGAGATCTTGAAACAACCTCATCTCAGCGTGGAGGGAGGCTCTGACTG  
GATATTCTACCTCGGCCGCGACACGCT

*Fig. 15CC*

**16464.1.edit**

CGAGCGGGCGACCGGGCAGGTNCAGACTCCAATCCANANAACCATCAAGCCAGATGTCAGAAGCTACACC  
ATCACAGGTTACAACCAGGCAGTACTACAAGANCTACCTGCACACCTTGAATGACAATGCTCGGAGCTC  
CCCTGTGGTCATCGACGCCCTCACTGCCATTGATGCACCATCCAACCTGCCTTGCCACCACACCCA  
ATTCCCTGCTGGTATCATGGCAGCCGCCACGTGCCAGGATTACCGGTACATCATCNAGTATGANAAGCCTG  
GGCCTCCTCCCAGAGAAGNGGTCCTCGGCCCCCTGNTGTCANAGGNTACTATTACTGNGCCNGC  
AACCGGCAACCGATATCNATTTGNCATTGGCCTCAACAATAATTA

**16464.2.edit**

AGCGTGGTTCGCGGCCGANGTCTGTCAGAGTGGCACTGGTAGAAGTTCCAGGAACCCCTGAACGTAAAGG  
GTTCTTCATCAGNGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGTCTGGAATGGGGCCATGAG  
ATGGTTGTCTGAGAGAGAGCTTCTGNCTGTCTTCCCTCCAATCAGGGGCTGCTCTGTGATTATT  
TTCAGGGCAATGACATAATTGTATATTGGTCCCGGNTCCAGGCCAGTAATAGTANCCTCTGTGACACC  
AGGGCNGNGCCGAGGGACCACTCTGGAGGGAGACCCAGGCTCTCATACTTGATGATGTAACCGGTA  
ATCCTGGCACGTGGCGGCTGCCATGATACCAGCAAGGAATTGGGGTGTGGCCAGGAAACGCAGGTT  
GGATGGNGCATCAATGGCAGTGGAGGCCGTCATGACCACAGGGGAGCTCCGACATTGTCATTCAAGGT  
G

**16465.1.edit**

AGCGTGGNCGCGGCCGAGGTGCAGCGCGGGCTGTGCCACCTCTGCTCTGCCAACGATAAGGAGGG  
TNCCTGCCCTCAGGAGAACATTAACNTCCCCAGCTGGCCTCTGCCGG

**16465.2.edit**

TCGAGCGGCCGCCGGCAGGTTTTTGCTGAAAGTGGNTACTTATTGGNTGGAAAGGGAGAAGCT  
GTGGTCAGCCAAGAGGAATACAGAGNCCGAAAAGGGGAGGGCAGGTGGCTGGAACCAGACGCAG  
GGCCAGGCAGAAACTTCTCTCCTCACTGCTCAGCCTGGTGGCTGGAGCTCANAAATTGGGAGTGAC  
ACAGGACACCTCCCACAGCCATTGGCGGGCATTCATCTGCCAGGACACTGGCTGTCCACCTGGCAC  
TGGTCCCAGACAAGCCGAGCTGGGAAAGTTAATGTTCACCTGGGGCAGGAACCTCCTATCATTG  
NGCAGAGAGCAGAAGGTGGCACAGCCCGCTGCACCTCGGCCGACACGCT

**16466.2.edit**

TCGAGCGGCCGCCGGCAGGTCCACCATAGTCCTGATACAACCACGGATGAGCTGTCAGGAGCAAGGT  
TGATTCTTCATTGGTCCGNCTCTCCTGGGGNCACCGCACTCGATATCCAGTGAGCTGAACATTG  
GGTGGCGTCCACTGGCGCTCAGGCT

**16467.2.edit**

TCGAGCGGTTCGCCCCGGCAGGTCCACCATAGCCACACCAATTCTGCTGGTATCATGGCAGGCCACGTGCC  
AGGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGTCTCTCCCAGAGAAGCGGTCCCTGGCCCC  
GCCCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGGACCGAATATACAATTATGTCATTGNC  
CTGAAGAATAATCANNANAGCGANCCCTGATTGGAAGGA

*Fig. 15DD*

Serial No. 09/827,271 Docket No. 210121.462C6

Inventor(s): Jennifer L. Mitcham et al.

Express Mail No. EV719392064US

## **"REPLACEMENT SHEETS"**

01 16469.edit

02 16469.edit

TCGAGCGGNGCCGGGCAGGTCTGCCAACACCAAGATTGGCCCCGCCGCATCCACACAGTCCGTGTG  
CGGGGAGGTAACAAGAAATACCGTGCCCTGAGGTTGGACGTGGGAATTCTCCTGGGCTCAGAGTGT  
GTACTCGTAAAACAAGGATCATCGATTTGTCTACAATGCATCTAATAACGAGCTGGTCGTACCAAGACCC  
TGGTGAAGAATTGCATCGTCTACGACAGCACACCGTACCGACAGTGGTACGAGTCCCCTATGCGCTG  
CCCCCTGGGCCGCAAGAAGGGAGCCAAGCTGACTCCTGAGGAAGAAGAGATTTAAACAAAAACGATCTAA  
NAAAAAAAACAAT

03 16470.edit

AGCGTGGTCGGCCGAGGTGAAATGGTATTAGCTTCTGGCACTTCTGGTCAAGCAACCCAGTGTTGGG  
CAACAAATGATCTTGAGGAACATGGTTTAGGCCGACACACCGCCACAACGCCACCCCCATAAGGCA  
TAGGCCAAGACCATAACCGCCGAATGTAGGACAAGAAGCTCTCTCAGACAACCATCTCATGGGCCCAT  
TCCAGGACACTCTGAGTACATCATTGATCTGTTGGCACTGATGAAGAACCTTACAGTTCAGGG  
TTCTGGAACCTTACCACTGCCACTCTGACAGGACCTGCCGGCGGCCGCTGA

04 16470.edit

TCGAGCGGCCGCCGGCAGGTCTGTAGAGTGGCACTGGTAGAAGTTCCAGGAACCTGAACGTAA  
GGTTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGTCTGGAATGGGGCCATGA  
GATGGTTGTCTGAGAGAGAGCTTCTTCCTACATTGGCGGGTATGGCTTGGCCTATGCCTATGGGGG  
TGGCCGTTGTGGCGGTGTGGTCCGCCCTAAACCATGTTCTCAAAGATCATTGTTGCCAACACTGGGT  
TGCTGACCAGAAGTGCCAGGAAGCTGAATACCATTACCTCGGCCGCGACCACGCTA

05 16471.edit

TCGAGCGGCCGCCGGCAGGTCTCCCTTGCAGGGCAGCGCATAGTGGACTCGTACAC  
TGTGGTACGGTGTGCTGATGAGCACGATGCAATTCTCACCAAGGGTCTTGGTACGAACCAGCTCGTT  
ATTAGATGCATTGAGACAACATCGATGATCCTGTTACGAGTACAACACTCTGAGCCCCAGGAGAAATT  
CCCCACGTCCAACCTCAGGGCACGGTATTCTTACCTCCCCGCACACGGACTGTGGATGCGGCGG  
GGGCCAAGCTGACTCCTGAGGAAGAAGAGATTAAACAAAAACGATCTAAAAAAATTAGAAGAAAATATG  
ATGAAAGGAAAAAGAATGCCAAAATCAGCAGTCTCCTGGAGGAGCAGTCCAGCAGGGCAAGCTCTTGCG  
TGCATCGCTTAAGGCCGGACAGTGTGACCGAGCAGATGGCTATGTCTAGAGGGCAAAGAAGTGGAGT  
TCTATCTTAAGAAAATCAGGGCCCAGAATGGTGNCTTCAACTAATCCAAAGGGAGTTCAGACCAGTG  
CAATCAGCAAAACATTGATACTGNTGCCAAATTATTGGTGCAGGGCTTGCACANTANGANNGGCTGGG  
TCTTGGGCTGGATTGGNACAAGCTTGGCAGCCTTCTTGGTTGCCAAAAACCTTGTGAAGAN  
GANACCTNGGGCGGACCCCTAACCGATTCCACNCCNGGNGCGTTCTANGGNCCCNCTG

*Fig. 15EE*

**06\_16471.edit**

AGCGTGGTCGGCCGAGGTCTGCTCAGCGAAGGTTCTGGCATAACCAATGATAAGGCTGCCAA  
AGACTGTTCCAATACCAGCACCAGAACCGACCTCCTACTGTTGCAGCACCTGCACCAATAATTGGCA  
GCAGTATCAATGTCTGCTGATTGCACTGGTCTGAAACTCCCTTGGATTAGCTGAGACACACCATTCTGG  
GCCCTGATTTCTTAAGATAGAACTCCAACCTTTGCCCTTAGCACATAGCCATCTGCTCGGTACACTGT  
CCCGGCCTTGAAGCGATGCACGCAAGAAGCTGCCCTGCTGGAAGTGCTCCTCCAGGAGACTGCTGATT  
TGGCATTCTTTCTTCATCATATTCTCTGAATTAGATCGTTTTGTTAAAATCTCTTCTCCT  
CAGGAGTCAGCTGGCCCCGCCATCCACACAGTCCGTGTGCGGGGAGGTAACAAGAAATACCGTGCC  
CTGAGGTTGGACGTGGGAATTCTCCTGGGCTCAGAGTGGTACTCGTAAAACAAGGATCATCGATG  
GTGNCTACAATGCATCTAATAACGAGCTGGTCGGACCCAAAGAACCTGGNGAANAAATGGATCGNCTCAT  
CGACAGGACACCGTACCCGACAGGGGNACGANTCCCCTATGCCTGCCCTGGCCGCAANAAAGGA  
AAACTGCCCGGGCGGCCNTCGAAAGCCAATTNTGGAAAAATCCATCACACTGGNGGCCNGTCGAGCA  
TGCAINTANAGGGGCCATTCCCCTNANN

**07\_16472.edit**

TCGAGCGGCCGCCGGCAGGTCCCCAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACAT  
GGAGACTGGTGAGACCTGCGTGTACCCCCTCAGCCCAGTGTGGCCCAGAAGAACTGGTACATCAGCAAG  
AACCCCAAGGACAAGAGGCATGTCTGGTTCGGCGAGAGCATGACCGATGGATTCCAGTTGAGTATGGCG  
GCCAGGGCTCCGACCCCTGCCATGTGGACCTCGGCCGACCACGCT

**08\_16472.edit**

AGCGTGGTCGGCCGAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCCATCTGAACGGATCC  
ATCGGTATGCTCTGCCAACCAGACATGCCTCTGCTCTGGGTTCTGCTGATGTACAGTTCTCTG  
GGCCACACTGGCTGAGTGGGTACACGCAGGTCTCACCAGTCTCCATGTTGCAGAAGACTTGTGGCA  
TCCAGGTTGCAGCCTGGTGGGACCTGCCGGCGCCGCTCGA

**09\_16473.edit**

TCGAGCGGCCGCCGGCAGGTCCACACACCCAACTCCTGCTGGTATCATGGCAGCCGCCACGTGCCA  
GGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGTCTCCTCCAGAGAAGTGGCCCTCGGCCCCG  
CCCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGGAACCGAATATACAATTATGTCAATTGCC  
TGAAGAATAATCAGAAGAGCGAGCCCCCTGATTGGAAGGAAAAGACAGACGAGCTCCCCACTGGTAACC  
CTTCCACACCCCAATCTCATGGACCAGAGATCTGGATGTTCCACAGTTCAAAAGACCCCTTCGTC  
ACCCACCCCTGGGTATGACACTGGAAATGGTATTGAGCTTCCCTGGCAGCAACCCAGTGTGG  
GCAACAAATGATCTTGAGGAACATGGNTTAGGCGGACCACACCGCCCACAACGCCACCCCCATAAGG  
CATAGGCCAAGACCATAACCGCCGAATGTAGGACAAGCTNTNTCANACACCATNTNATGGCCCCA  
TTCCAGGACACTCTGAGTACATATTATGNCATCTGTGGCACTTGATGAAAACCTTACAGTTCAAGGTT  
CTGGAACCTTACCAAGGCCTTACAGGACTNGGCCGGACNCCTTAAGCCNATTNCACCCTGGGCGTTCT  
ANGGTCCCACTCGNNCACTGGNGAAAATGGCTACTGTN

**11\_16474.edit**

AGCGTGGTCGCGGCCGAGGTCCACTAGAGGTCTGTGCCATTGCCAGGCAGAGTCTCGTTACAAA  
CTCCTAGGAGGGCTTGCTGCGGAGGGCTGCTATGGTGTGCTGCGGTCATCATGGAGAGTGGGGCC  
AAAGGCTGCGAGGTTGTGGTCTGNAAAATCCNAGGACANGAGGGCTAAATTCCATGAAGTTGTGGAT  
GGCCTGATGATCCACAATCGGAGACCCTGTTAACTACTACCGTCTNACCNCCTGCTGNCCNCCCCNTTC  
TGCTNAANACATNGGNTNNTNCTGNCCNTCCTGGTNGAANATNNAATNGCCTNCCNTANCNT  
TACTNGNTCCANANTGGCCTTAAANAATCCNCCTGCCTNNNCACTGTTCANNTNTNNTCGTAAACC  
CTATNANTNNATTANATNNTNNNNNCTACCCCCCTCNTCATTNANCCNATANGCTNNNAANTCCTNAN  
NCCTCCNCCNNTNCNTACTNANTNCTNNCCATTACNNAGCTTTCTTAANATAATGNNG  
CCNGCTCTNCATNTCTACNATNTGNNAATNCCCCNCCCCNACGNNTTTGACCTNNNAACCTCCT  
TTCCTTCCCTNCNAAATTNCNNANTCCNCNTCCNCNTTCGGNTNNTCCATNCTTCCANNNT  
CANTCTANCNCNTNCAACTTATTTCTNTCATCCCTNTTACANNCCCCNTNTACTCNCCNNT  
NCATTANATTGAAACTNCCACNNCTANTNCCTNCTACNNTTATTTNCGNTNCTACNTAATAN  
TTAATNANTNTCN

**12\_16474.edit**

TCGAGCGGCCGCCGGCAGGTCTGCCAAGGAGACCCGTATGCTGTGGGACTGGCTGGGATGGC  
AGGCGGCTCTGGCTCCCACCCCTGTTCTGAGATGGGGTGGTGGCAGTATCTCATCTTGGGTCCA  
CAATGCTCACGTGGTCAGGCAGGGCTTCTAGGGCCAATCTTACCAAGTGGTCCCAGGGCAGCATGAT  
CTTCACCTGATGCCAGCACACCTGCTGAGAACACGTGGCGACAAGCAGTGTCAACGTAGTAAGTT  
AACAGGGCTCCGCTGGATCATCAGGCCATCCACAAACTCATGGATTAGCCCTGTCCCTGGAGTT  
TCCCAGACACCACACCTCGCAGCCTTGGCCCCACTCTCCATGATGAACCGCAGCACACCATAGCAGGC  
CCTCCGACAAGCAAGCCCTCTAAGAATTGTAACGCANANACTGCTGGCAATGGCACACAAACCTCT  
AGTGGACCTCGGNCGCGACCACGC

**13\_16475.edit**

TCGAGCGGCCGCCGGCAGGTCTGGTCCAGGATAGCCTGCGAGTCCTCCTACTGCTACTCCAGACTTGA  
CATCATATGAATCATACTGGGGAGAATAGTCTGAGGACCAAGTAGGGCATGATTACAGATTCCAGGGGG  
CCAGGAGAACCAAGGGACCCCTGGTGTCTGGAATACCAGGGTACCAATTCTCCAGGAATACCAGGAG  
GGCCTGGATCTCCCTGGGGCCTTGAGGTCTGACCATTAGGAGGGCGAGTAGGAGCAGTTGGAGGCTG  
TGGGCAAATGACAACATTCTCAAATGGAATTCTGGGTGGGCAGTCTAATTCTGATCCGTACATA  
TTATGTCATCGCAGAGAACGGATCCTGAGTCACAGACACATATTGGCATGGTCTGGCTCCAGACATCTC  
TATCCGCATAGGACTGACCAAGATGGAACATCCTCCTCAACAAGCTNCTGTTGTGCCAAAAATAATAG  
TGGGATGAAGCAGACCGAGAAGTANCCAGCTCCCTTTGCACAAAGCNTCATGTCTAAATATCAGA  
CATGAGACTCTTGGGAAAAAGGAGAAAAAGAAAAAGCAGTTCAAAGTANCCNCCATCAAGTGGTCC  
TTGCCNTTCAGCACCCGGCCCCGTATAAACACCTNGGGCCGGACCCCCCTT

*Fig. 15GG*

**14\_16475.edit**

AGCGTGGTCGCGGCCGAGGTGTTTATGACGGGCCGGTCTGAAGGGCAGGAACAAC TGATGGTGC  
TACTTGAAGTCTTTCTTCTCCTTTGCACAAAGAGTCTCATGTCTGATATTAGACATGATGAGCTT  
GTGCAAAGGGAGCTGGCTACTTCTCGCTTGCTCATCCACTATTATTTGGCACAAACAGGAAGCTGTT  
GAAGGAGGATGTTCCATCTTGGTCAGTCTATGCGGATAGAGATGTCTGGAAGCCAGAACCATGCCAAT  
ATGTGTCTGTGACTCAGGATCCGTTCTGCGATGACATAATATGTGACGATCAAGAATTAGACTGCCAA  
CCCAGAAATTCCATTGGAGAATGTTGTGCAGTTGCCACAGCCTCAACTGCTCTACTGCCCTCTAA  
TGGTCAAGGACCTCAAGGCCCAAGGGAGATCCAGGCCCTCTGGTATTCTGGAGAAATGGTGACCCT  
GGTATTCCAGGACAACCAGGGTCCCTGGTTCTCCTGGCCCCCTGGAATCNGNGAATCATGCCCTACT  
GGTCCTCAAACATTCTCCANATGATTCATATGATGTCAAGTCTGGATAGCNAGTANGGANGGACTCGC  
AGGCTATTCTGGACCANACCTGCCGGGGGGCGTTGAAAGCCCCAATTCGCANANNTNCNTCACACTG  
GCCGCCGTCGAGCTGCTTAAAAGGGCATTCCNCCTTAGNGNGGGGANTACAATTACTNGCGGCGT  
TTTANANC CGCGNGNCTGGAAAT

**15\_16476.edit**

AGCGTGGTCGCGGCCGAGGTCCACATCGGCAGGGTCGGAGGCCCTGGCCGCATACTGAAC TGGAAATCC  
ATCGGTATGCTCTGCCGAACCAGACATGCCCTTGCTGGTTCTGCTGATGTACAGTTCTCTG  
GCCACACTGGCTGAGTGGGTACACGCAGGTCTCACCAGTCTCCATGTTGCAGAACACTTGATGGCA  
TCCAGGTTGCAGCCTTGGTTGGGTCAATCCAGTACTCTCCACTCTCCAGTCAGAGTGGCACATCTGAG  
GTCACGGCAGGTGCGGGGGGTCTTGGCTGCCCTGGCTCCGGATGTTCTGATCTGCTGGCT  
CAGGCTCTGAGGGTGGTCCACCTCGAGGTACGGTCACGAACCACATTGGCATCATCAGCCGGTAG  
TAGCGGCCACCATCGTGAGCCTCTTCTGANGTGGCTGGGGAGGAAC TGAAAGTCGAAACACCAGCCTGGG  
AGGACCAGGGGGACCAANAGGTCCAGGAAGGGCCGGGGGGACCAACAGGACCAGCATACCAAGTG  
CGACCCGCGAGAACCTGCCGGCGNCCGCTCGAA

**16\_16476.edit**

TCGAGCGNNCGCCGGGCAGGTCTCGCGTCGCACTGGTATGCTGGCCTGTTGGTCCCCCGGCCCT  
CCTGGACCTCCTGGTCCCCCTGGCCTCCCAGCGCTGGTTGACTTCAGCTCCTGCCCAAGCCACCTC  
AAGAGAAGGCTCACGATGGTGGCCGCTACTACCGGGCTGATGATGCCAATGTGGTCGTGACCGTGACCT  
CGAGGTGGACACCACCCCTCAAGAGCCTGAGCCAGCAGATCGAGAACATCCGGAGGCCAGAGGGCAGCCG  
CAAGAACCCCGCCGACCTGCCGTGACCTCAAGATGTGCCACTTGACTGGAAGAGTGGAGAGTACTGG  
ATTGACCCAACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTG  
CGTGTACCCCACTCAGCCCAGTGTGGCCAGAAGAAC TGATCAGCAAGAACCCCAAGGACAAGAGG  
CATGTCGGTCTGGCGAGAGCATGACCGATGGATTCCAGTTGAGTATGGCGGCCAGGGCTCCACCCCTG  
CCGATGTGGACCTCCGGCGCGACCACCTT

*Fig. 15HH*

**17\_16477.edit**

TNGAGCGGCCGCCCCGGGCAGGNTGNNAACGCTGGTCCTGCTGGCCTCCTGGCAAGGCTGGTGAAGATG  
GTCACCCCTGGAAAACCCGGACGACCTGGT GAGAGAGGAGTTGGACCACAGGGTGCTCGTGGTTCCC  
TGGAACTCCTGGACTTCCTGGCTCAAAGGCATTAGGGACACAATGGTCTGGATGGATTGAAGGGACAG  
CCC GG TGCTCCTGGT GAGGGT GACACTGGT GCCC CTGGT GAAA ATG GAA CT CCAGGT CAA ACAGGAG  
CCC GTGGGCTCCTGGT GAGAGAGGACCGT GTGGT GCCC CTGGCCANACCTCGGCCGACCA CGCT  
AAGCCC GAATTCCAGCACACTGGNGGCCGTTACTANTGGATCCGAGCTCGGTACCAAGCTGGCGTAATC  
ATGGTCATAGCTGTTCTGNGTGAAATTGTTATCCGCTCACAA TTCACACANACATACGAAGCCGGAAAGC  
ATAAAGTGTAAAGCCTTGGGGT GCTAATGAGTGAGCTAACNCATTAATTGCGTTGCGCTACTGCCG  
CTTTCCANNNGGAAACCNTGGCNTNGCCNGCTGCNTTAANTGAAATCCGCCNACCCCCGGGAAAAG  
NCGGTTGCNGTATTGGGCNTTTCCCTTCGGNTACTTGANTTANTGGCTTGGNCNTTCG  
GGTGNGGCGANCNGGTCAACNTCACNCCAAGGNGGNAANACGGTTTCCCANAATCCGGGGNTANC  
CCAANGNAAAACATNNNCNAANGGGCT

**18\_16477.edit**

AGCGTGGTTNGCGGCCGAGGTCTGGGCCAGGGCACCAACACGT CCTCTCACCAGGAAGCCCACGGG  
CTCCTGTTGACCTGGAGTTCCATTTCACCAGGGCACCAAGGTTCACCCCTCACACCAGGAGCACCGGGC  
TGTCCCTTAATCCATNCAGACCATTGTGNCCCCTAATGCCTTGAAGCCAGGAAGTCCAGGAGTTCCAGG  
GAAACCACCGAGCACCCGTGGTCCAACAACTCCTCTCACCAGGTGTCGGGTTCCAGGGTGACC  
ATCTCACCAAGCCTGCCAGGAGGACCAGCAGCGTTACCAACCTGCCCGGGCGCTCGA

**21\_16479.edit**

TCGAGCGGCCGCCCCGGCAGGTCCATTCTCCCTGACGGTCCACTTCTCTCCAATCTTAGTTCACAC  
CATTGTCATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCAAAGCCTAACGCACTGGCACAAACA  
GTTAAAGCCTGATTAGACATTGTTCCACTCATCTCAAACGGCATAATGGAAACTGTGTAGGGTCAA  
AGCACGAGTCATCCGTAGGTTGGTCAAGCCTCGTTGACAGAGTTGCCACGGTAACAACCTTCCGA  
ACCTTATGCCTCTGCTGGTCTTCAGTGCCCTCACTATGATGTTAGGTGGCACCTCTGGTGAGGACCTC  
GGCGCGACCACGCT

**22\_16479.edit**

AGCGTGGTCGCGGCCGAGGTCCCTACCAAGAGGTGCCACCTACAACATCATAGTGGAGGCAGTGAAAGACC  
AGCAGAGGCATAAGGTTGGGAAGAGGTTGTTACCGTGGCAACTCTGTCAACGAAGGCTGAACCAACC  
TACGGATGACTCGTCTTGACCCCTACACAGTTCCCATTATGCCGTTGGAGATGAGTGGGAACGAATGT  
CTGAATCAGGCTTAAACTGTTGCCCCAGTGCTTAGGCTTGGGAAGTGGTCAAGATGTGATTCT  
AGATGGTGCCATGACAATGGTGTGAACTACAAGATTGGAGAGAAGTGGGACCGTCAGGGAGAAAATGGAC  
CTGCCCGGGCCGGCCGCTCGA

*Fig. 15II*

**24\_16480.edit**

TCGAGCGNNCGCCGGGCAGGTCCAGTAGTGCCTCGGGACTGGGTTACCCCCAGGTCTCGGGCAGTT  
GTCACAGCGCCAGCCCCGCTGGCCTCAAAGCATGTGCAGGAGCAAATGGCACCGAGATATTCTCTGC  
CACTGTTCTCCTACGTGGTATGTCTCCATCATCGTAACACGTTGCCTCATGAGGGTCACACTGAATTCT  
CCTTTCCGTTCCAAGACATGTGCAGCTCATTGGCTGGCTATAAGTTGGGAAAGTTGTTGAAACTG  
TGCCACTGACCTTACTTCCTCTACTGGAGCTTCGTACCTCTGCTGTTGGTAAATGGT  
GGATCTTCTATCAATTTCATTGACAGTACCCACTTCTCCAAACATCCAGGGAAATAGTGATTTCAGAGCGA  
TTAGGAGAACCAAATTATGGGGCAGAAATAAGGGGCTTTCCACAGGTTTCCAGGGAAAGATTTCAGT  
GGTACTTAAAAGAATACTCAACAGTGTCTCATCCCCATAGCAAAAGAAGAAACNGTAAATGATGGAANG  
CTTCTGGAGATGCCNNCATTAAGGGACNCCCAGAACCTCACCATCTACAGGACCTACTTCAGTTACANNA  
AGNCACATANTCTGACTCANAAAGGACCCAAAGTAGCNCCATGGNCAGCATTNAGCCTTCCCCTGGGAA  
AAANNTTACNTTCTTAAANCCTNGGCCNNGACCCCTTAAGNCCAAATTNTGGAAAANTCCNTNCNNCTGG  
GGGCNGTTCNACATGCNTTNAAGGGCCAATTNCCCCNT

**25\_16481.edit**

TCGAGCGGCCGCCGGGCAGGTGTCGGAGTCCAGCACGGGAGGCAGTGGCTTGTAGTTGTTCTCCGGCT  
GCCCATTGCTCTCCACTCCACGGCGATGTCGCTGGATAGAACCTTGACCAGGCAGGTCAAGGCTGAC  
CTGGTCTTGGTCATCTCCTCCGGATGGGGCAGGGTGTACACCTGTGGTCTCGGGGCTGCCCTTG  
GCTTGGAGATGGTTCTCGATGGGGCTGGAGGGCTTGTGGAGACCTTGACTTGACTCCTTGCC  
ATTAGCCAGTCTGGTGCAGGACGGTGAGGACGCTGACCACACGGTACGTGCTGTTGACTGCTCCTCC  
CGCGGCTTGTCTGGCATTATGCACCTCACGCCGTCCACGTACCGTTGACCTCAGGGCTTC  
GTGGCTACGTCCACCACCGCATGTAACCTCAGACCTCGGCCGACCACGCT

**26\_16481.edit**

AGCGTGGTCGCGGCCGAGGTCTGAGGTTACATGCGTGGTGGACGTGAGCCACGAAGACCCCTGAGGT  
CAAGTTCAACTGGTACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAAGCCGGGAGGAGCAGTAC  
AACAGCACGTACCGTGTGGTCAGCGTCCTCACCGTCTGCACCAGGACTGGCTGAATGGCAAGGAGTACA  
AGTCAAGGTCTCCAACAAAGCCCTCCAGCCCCATCGAGAAAACCATCTCAAAGCCAAGGGCAAGC  
CCCGAGAACACAGGTGTACACCCCTGCCCATCCGGAGGAGATGACCAAGAACCGAGGTAGCCTGAC  
CTGCCTGGTCAAAGGCTTCTATCCCAGCGACATGCCGTGGAGTGGAGAGCAATGGCAGCCGGAGAA  
CAACTACAAGACCACGCCCTCCGTGGACTCCGACACCTGCCGGCGCTCGA

**27\_16482.edit**

TCGAGCGGCCGCCGGGCAGGTGAATGGCTCTCGCTGACCACCCGGTCTGGTGGGGTACAGAG  
CTCCGATGGGTGAAACCATTGACATAGAGACTGTCCCTGTCAGGGTGTAGGGGCCAGCTCAGTGATGC  
CGTGGGTCACTGGCTCAGCTCCAGTACAGCCCTCTGTCCAGTCCAGGGCTTGGGTCAAGGACG  
ATGGGTGCAGACAGCATCCACTCTGGTGGCTGCCCATCCTCTCAGGCCTGAGCAAGGTCACTGCAA  
CCAGAGTACAGAGAGCTGACACTGGTGTCTGAACAAGGGATAAGCAGACCCCTGAAGGACACCTCGGC  
CGCGACCACGCT

*Fig. 15JJ*

**28\_16482.edit**

AGCGTGGTCGCGGCCGAGGTCTCCTCAGGGCTGCTTATGCCCTGTTCAAGAACACCAGTGTAGCTCT  
CTGTACTCTGGTTGCAGACTGACCTTGCTCAGGCCTGAGAAGGATGGGGCAGCCACCAGAGTGGATGCTG  
TCTGCACCCATCGTCCTGACCCCCAAAGCCCTGGACTGGACAGAGAGCGGCTGTACTGGAAGCTGAGCCA  
GCTGACCCACGGCATCACTGAGCTGGGCCCCTACACCCCTGGACAGGGACAGTCTATGTCAATGGTTTC  
ACCCATCGGAGCTGTACCCACCAGCACCGGGTGGTCAGCGAGGAGCCATTCAACCTGCCCGGG  
CGGCCGCTCGA

**29\_16483.edit**

AGCGTGGTCGCGGCCGAGGTCTGTCAGAGTGGCACTGGTAGAAGTCCAGGAACCCCTGAACGTAAAGGG  
TTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAAGTGTCCCTGGAATGGGGCCATGAGA  
TGGTTGTCTGAGAGAGAGCTTCTGTCCCTACATTGGCGGGTATGGTCTTGGCCTATGCCTTATGGGGGTG  
GCCGTTGTGGCGGTGTGGTCCGCCTAAAACCATGTTCTCAAAGATCATTGTTGCCAACACTGGGTTG  
CTGACCAGAAGTGCCAGGAAGCTGAATAACCATTCCAGTGTACCCAGGGTGGGTGACGAAAGGGGTC  
TTTGAACTGTGGAAGGAACATCCAAGATCTCTGGTCCATGAAGATTGGGGTGTGGAAGGGTTACAGTTG  
GGGAAGCTCGTCTGTCTTTCCATTCAACAGGGGCTCGCTCTGATTATTCTTCAGGGCAATGACATA  
AATTGTATATTGGTCCCGGTTCCAGGCCAGTAATAGTAGCCTCTGTGACACCAGGGCGGGGCCAGGGA  
CCCTCTNTGGAAGAGACCAGCTCTCATACTTGATGATGAGNCCGGTAATCCTGGCACGTGGNGGTTGC  
ATGATNCCACCAAGGAAATNGGNGGGNGGACCTGCCGGCGCCGTTCAAAAGCCAATTCCACACA  
CTTGGNGGCCGTACTATGGATCCCACTCNGTCCAATTGGNGGAATATGGCATAACTTT

**31\_16484.edit**

TCGAGCGGCCGCCGGCAGGTCTTGCACCTTCAGCAAGTGGGAAGGTGTAATCCGTCTCCACAGACA  
AGGCCAGGACTCGTTGTACCCGTTGATGATAGAATGGGTACTGATGCAACAGTTGGTAGCCAATCTGC  
AGACAGACACTGGCAACATTGCGGACACCCCTCCAGGAAGCGAGAATGCAGAGTTCCCTGTGATATCAAG  
CACTTCAGGGTTGTAGATGCTGCCATTGTCGAACACCTGCTGGATGACCAGCCAAAGGAGAAGGGGGAG  
ATGTTGAGCATGTTCAGCAGCGTGGCTCGCTGGCTCCACTTGTCTCCAGTCTTGATCAGACCTCGGCC  
GCGACCACGCT

**37\_16487.edit**

AGCGTGGTCGCGGCCGAGGTCTGCTTACAGTCCTCAGGACTCTACTCCCTCAGCAGCGTGGTGACCGTG  
CCCTCCAGCAACTCGGCACCCAGACCTACACCTGCAACGTAGATCACAAGCCCAGCAACACCAAGGTGG  
ACAAGAGAGTTGAGCCAAATCTGTGACAAAACTCACACATGCCACCGTGGCCAGCACCTGAACCTCTG  
GGGGGACCGTCAGTCTCCTTCCCCCGCATCCCCCTCCAAACCTGCCGGCGGCCGCTG

*Fig. 15KK*

**38\_16487.edit**

CGAGCGGCCGCCGGGCAGGTTGGAAGGGGGATGCGGGGGAAAGAGGAAGACTGACGGTCCCCCAGG  
AGTCAGGTGCTGGCACGGTGGCATGTGTGAGTTGTCACAAGATTGGCTCAACTCTTGTCCAC  
CTTGGTGGTGTGCTGGCTTGATCTACGTTGCAGGTGTAGGTCTGGGTGCCAAGTTGCTGGAGGGCAGC  
GTCACCACGCTGCTGAGGGAGTAGAGTCCTGAGGACTGTAGGACAGACCTCGGCCGACCACGCT

**39\_16488.edit**

NGGNNGGTCCGGNCNGNCAGGACCACTCNTCTCGAAATA

**41\_16489.edit**

AGCGTGGTCGCGGCCGAGGTCTCACTGCCTCCTGCAAAGCACCGATAGCTGCCTCTGGAAGCGCAGA  
TCTGTTTAAAGTCCTGAGCAATTCTCGCACAGACGCTGGAAGGGAAGTTGCGAATCAGAAGTTCACT  
GGACTTCTGATAACGTCTAACGGAGCGCCACAGTACCAAGGACCTGCCCGGGCGCTCGA

**42\_16489.edit**

TCGAGCGGCCGCCGGCAGGTCCCTGGTACTGNGCGCTCCGTGAAATTAGACGTTATCAGAAGTCCACT  
GAACTTCTGATTGCAAACTTCCCTCCAGCGTCTGGTGCAGAAAATTGCTCAGGACTTAAACAGATCTG  
CGCTTCCAGAGCGCAGCTATCGGTGTTGCAGGAGGCAAGTGAGGACCTCGGCCGACCACGCT

**45\_16491.edit**

TCGAGCGGCCGCCGGCAGGTCCACATCGGCAGGGTGGAGCCCTGGCCGCCACTCGAACTGGAAT  
CCATCGGTCTGCTCGCCGAACCAAGACATGCCTCTGCTCCTGGGTTCTGCTGATGTACCAAGTTCTT  
CTGGGCCACACTGGGCTGAGTGGGTACACGCAGGTCTCACCAGTCTCCATGTTGCAGAAGACTTGATG  
GCATCCAGGTTGCAGCCTGGTGGGTCAATCCAGTACTCTCCACTCTTCAGTCAGAGTGGCACATCTT  
GAGGTACGGCAGGTGCAGGGCGGGTTCTTGACCTCGGCCGACCACGCT

*Fig. 15LL*

**46\_16491.edit**

GTGGGNTGAACCCNTTNANCTCGCTTGGTACCGAGCTGGATCCACTAGTAACGGCCGCCAGTGTGC  
TGGAATTGGCTAGCGTGGTCGGCCGAGGTCAAGAACCCGCCGCACCTGCCGTGACCTCAAGATG  
TGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGATGCCATCA  
AAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCGTGTACCCCACTCAGCCCAGTGTGGCCAGAAGAA  
CTGGTACATCAGCAAGAACCCCAAGGACAAGAGGCATGTCGGTGGCGAGAGCATGACCGATGGATT  
CAGTTCGAGTATGGCGGCCAGGGCTCCGACCCCTGCCGATGTGGACCTGCCCGGGCGCTCGA

**47\_16492.edit**

AGCGTGGTCGGCCGAGGTCTGGATGCTCCTGCTCACAGTGAGATATTACAGGATCACTACGGAG  
AAACAGGAGGAAATAGCCCTGTCCAGGAGTTCACTGTGCCCTGGGAGCAAGTCTACAGCTACCACATCAGCGG  
CCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTGTCAGTGGCCGGAGACAGCCCCGCAAGCA  
GCAAGCCAATTCCATTAATTACCGAACAGAAATTGACAAACCATCCCAGATGCAAGTGACCGATGTTCA  
ACAACAGCATTAGTGTCAAGTGGCTGCCTCAAGTTCCCTGTTACTGGTACAGAGTAACCACCACTCCA  
AAAATGGACCAGGACCAACAAAAACTAAAAGTGCAGGTCCAGATCAAACAGAAATGACTATTGAAGGCTG  
CAGCCCACAGTGGAGTATGTGGTTAAGTGTCTATGCTCAGAATCCAAGCGGAGAGAAGTCAGCCTCTGGTT  
CAGACTGNAAGTAACCAACATTGATGCCCTAAAGGACTGGCATTCACTGATGNGGATGCCATTCCATCAA  
AATTGNTTGGAAAACCCACAGGGGCAAGTTNCANGTCAGGNGGACCTACTCGAGCCCTGAGGATGGA  
ATCCTTGACTNTCCCTNNCCTGATGGGGAAAAAAACCTNAAAACTTGAAGGACCTGCCGGCGGCCG  
TNCAAAACCCATTCCACCCCTGGGGCGTTCTATGGGNCCCACTCGGACCAAACTTGGGTAAN

**48\_16492.edit**

TCGAGCGGCCGCCGGCAGGTCTTGAGCTCTGCAGTGCTTCTCACCATCAGGTGCAGGGAAATGC  
TCATGGATTCCATCCTCAGGGCTCGAGTAGGTACCCCTGTACCTGGAAACTTGCCCTGTGGCTTCCCA  
AGCAATTGATGGAATCGGCATCCACATCAGTGAATGCCAGTCCTTAGGGCGATCAATGTTGGTTACTGC  
AGTCTGAACCAGAGGCTGACTCTCTCCGCTGGATTCTGAGCATAGACACTAACACATACTCCACTGTGG  
GCTGCAAGCCTCAATAGTCATTCTGTTGATCTGGACCTGCAGTTAGTTTTGTTGGTCCTGGTCCATT  
TTTGGGAGTGGTGGTTACTCTGTAACCAGTAACAGGGAACTTGAAGGCAGCCACTTGACACTAATGCTGT  
TGTCTGAACATCGGTCACTGCATCTGGATGGTTGTCAATTCTGTTGGTAATTAAATGAAATTGGCT  
TGCTGCTGCCGGGCTTGTCTCCACGGCCAGTGACAGCATACACAGTGATGGTATAATCAACTCCAGGTT  
AAGCCGCTGATGGTAGCTGAAACTTGCTCCAGGCACAAGTGAACCTGACAGGGCTATTCTNCTGTT  
CTCCGTAAGTGATCCTGTAATATCTCACTGGGACAGCAGGANGCATTCCAAAACCTCGGGCGNGACCCCT  
AAGCCGAATTNTGCAATATNCATCACACTGGCGGCCGCTCGANCATTCAAAAAGGCCAATCNCCCCTA  
TAGGGAGTNTANTACAATTNG

*Fig. 15MM*

**49\_16493.edit**

TCGAGCGGCCGCCGGGCAGGTCACTTTGGTTTGGCATGTCGGTGGTCAAAGATAAAACTAAGT  
TTGAGAGATGAATGCAAAGGAAAAAAATATTCCAAAGTCCATGTGAAATTGTCTCCCATTGGCTT  
TGAGGGGGTTCAGTTGGGTTGCTGTCTGGGGTGGGGAAAGTTGGTGGTGGAGGGAGC  
CAGGTTGGGATGGAGGGAGTTACAGGAAGCAGACAGGCCAACGTCG

**55\_16496.edit**

AGCGTGGTCGCGGCCGAGGTCCACCAGAGGTGCCACCTACAACATCATAGTGGAGGCAGTAAAGACC  
AGCAGAGGCATAAGGTCGGGAAGAGGTTTACCGTGGCAACTCTGTCAACGAAGGCTGAACCAACC  
TACGGATGACTCGTCTTGACCCCTACACAGTTCCCATTATGCCGTTGGAGATGAGTGGAACGAATGT  
CTGAATCAGGCTTAAACTGTTGCCAGTGCTTAGGCTTGGAAAGTGGTCATTTCAGATGTGATTCATCTA  
GATGGTGCCATGACAATGGTGTGAACATACAAGATTGGAGAGAAGTGGACCGTCAGGGAGAAAATGGACC  
TGCCCCGGCGGCCGCTCGA

**56\_16496.edit**

TCGAGCGGCCGCCGGGCAGGTCCATTTCCTGACGGTCCCACCTCTCCAATCTTAGTTCACAC  
CATTGTCATGGCACCATCTAGATGAATCACATCTGAAATGACCACTCCAAAGCCTAACGCACTGGCACAACA  
GTTTAAAGCCTGATTCAAGACATTGTTCCACTCATCTCCAAACGGCATAATGGGAAACTGTGTAGGGTCAA  
AGCACGAGTCATCCGTAGGTTGGTCAAGCCTCGTGACAGAGTTGCCACGGTAACAACCTCTCCGA  
ACCTTATGCCTCTGCTGGTCTTCAGTGCCCTCCACTATGATGTTAGGTGGCACCTCTGGTAGGGACCTC  
GGCCGCGACCACGCT

**59\_16498.edit**

TCGAGCGGCCGCCGGGCAGGTCCACCATAGTCCTGATACAACCACGGATGAGCTGTCAAGGAGCAAGGT  
TGATTCTTCATTGGTCCGGTCTCTCCTGGGGTCACCCGCACTCGATATCCAGTGAGCTGAACATTGG  
GTGGTGTCCACTGGCGCTCAGGCTTGTGGGTGACCTGAGTGAACCTCAGGTCAAGTGGTGCAGGAAT  
AGTGGTACTGCAGTCTGAACCAGAGGCTGACTCTCTCCGCTTGGATTCTGAGCATAGACACTAACACAT  
ACTCCACTGTGGCTGCAAGCCTCAATAGTCATTCTGTTGATCTGGACCTGCAGTTAGTTTTGTTG  
GTCCTGGTCCATTGGAGTGGTGGTACTCTGTAACCAGTAACAGGGAACTTGAAGGCAGCCACTG  
ACACTAATGCTGTTGCTGAACATCGGTCACTGCATCTGGATGGTTGNCAATTCTGTTGGTAATT  
ATGGAAATTGGCTGCTGCTGCCAGGGCTGTCTCCACGGCCAGTGACAGCATACACAGNGATGGNATNAT  
CAACTCCAAGTTAAGGCCCTGATGGTAACTTAAACTGCTCCCAGCCAGNGAACTTCCGGACAGGGTAT  
TTCTCTGGTTTCCGAAAGNGANCCTGGAATNNCTCCTGGANCAGAAGGANCNTCCAAAACCTGGGCC  
GGAACCCCTT

*Fig. 15NN*

**60\_16473.edit**

AGCGTGGTCGCGGCCGAGGTCTGTAGAGTGGCACTGGTAGAAGTCCAGGAACCCCTGAACGTAAAGGG  
TTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTACTCAGAAGTGTCTGGAATGGGGCCCATGAGA  
TGGTTGCTGAGAGAGAGCTTCTGCCTACATTGGCGGGTATGGTCTTGGCCTATGCCTTATGGGGTG  
GCCGTTGCGGCGGTGGTCCGCCTAAAACCATGTTCCCAAAGATCATTGTTGCCAACACTGGGTTG  
CTGACCAGAAGTGCCAGGAAGCTGAATACCATTCCAGTGTACACCCAGGGTGGTGACGAAAGGGTC  
TTTGAACGTGGAAGGAACATCCAAGATCTCTGGTCCATGAAGATTGGGGTGTGGAAGGGTTACAGTTG  
GGGAAGCTCGTCTGTCTTTCCCAAATCAGGGCTCGCTTCTGATTATTCTCAGGGCAATGACATA  
AATTGTATATTGGTCCCGTCCAGGCCAGTAATAGTAGCCTCTGTGACACCAGGCGGGCCCANGGA  
CCACTTCTCTGGGANGAGACCCAGCTCTACATTGATGATGTAACCCGTAATCCTGCACGTGGCGGCT  
GNCATGATACCANCAAGGAATTGGTGNGGNGACCTGCCGGGCCCTCNA

**60\_16498.edit**

AGCGTGGTCGCGGCCGAGGTCTGGATGCTCCTGCTGTACAGTGAGATATTACAGGATCACTACGGAG  
AAACAGGAGGAATAGCCCTGTCCAGGAGTTCACTGTGCTGGAGCAAGTCTACAGCTACCATCAGCGG  
CCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTGACTGGCCGTGGAGACAGCCCCGCAAGCA  
GCAAGCCAATTCCATTAATTACCGAACAGAAATTGACAACACCATCCCAGATGCAAGTGACCGATGTTCA  
ACAACAGCATTAGTGTCAAGTGGCTGCCTCAAGTTCCCTGTTACTGGTACAGAGTAACCACCACTCCA  
AAAATGGACCAGGACCAACAAAAACTAAAACAGCAGGTCAGATCAAACAGAAATGACTATTGAAGGCTTG  
CAGCCCACAGTGGAGTATGTGGTTAGTGTCTATGCTCAGAATCCAAGCGGAGAGAGTCAGCCTCTGGTTCA  
GAUTGCAGTAACCACTATTCCCTGCACCAACTGACCTGAAGTTCACTCAGGTACACCCACAAGCCTGAGCC  
GCCAGTGGACACCACCCAAATGTTCACTCACTGGATATCGAGTGCAGGTGACCCCCAAGGAGAAGACCCGG  
ACCCATGAAAGAAATCACCTGCTCCTGACAGCTCATCCGNGGGTATCAGGACTATGGGGACTGCC  
CCGGCNGGCCNTCGAAANCAGAATTNTGAAATTTCCTNCACTGGNGGCGNTCGAGCTNCTNTANA  
NGGCCCAATTNCCTNTAGNGGTCGTN

**61\_16499.edit**

AGCGTGGTCGCGGCCGAGGTCNAGG

**62\_16483.edit**

TCGAGCGGCCGCCCCGGCAGGTCCACACACCCAAATTCCCTGCTGGTATCATGGCAGCCGCCACGTGCCA  
GGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGCTCCTCCAGAGAAGTGGCCCTCGGCCCCG  
CCCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGGAACCGAATATACAATTATGTCATTGCC  
TGAAGAATAATCAGAAGAGCGAGCCCCCTGATTGGAAGGAAAAGACAGACGAGCTCCCCAAGTGTAAAC  
CTTCCACACCCCAATCTCATGGACCAGAGATCTGGATGTTCTCCACAGTTCAAAGACCCCTTCGTC  
ACCCACCCCTGGGTATGACACTGGAAATGGTATTCAAGCTCCTGGCACTTCTGGTCAAGCAACCCAGTGTGG  
GCAACAAATGATTTGAGGAACATGGTTAGGCGGACCACACCGCCCACAACGGGACCCCCATAAGG  
NATAGGCCAAGACCATAACCCGCCGAATGTAGGACAAGAAGCTNTCTCAACAACCACATCTCATGGGCC  
ATTCCAGGACACTTCTGAGTACATCATTCTATGTACCTGGTGGGACTTGATGAAANAACCCTACAGTTC  
AGGGTCTGGAACTTCTACCAAGNGCCACTTCTGACAGGANCTTGGCGNGACCACCC

**63\_16500.edit**

AGCGTGGTCGCGGCCGAGGTCCATTTCTCCCTGACGGTCCCACCTCTCTCCAATCTTAGTTCACACCA  
TTGTCATGGCACCATCTAGATGAATCACATCTGAAATGACCACTTCAAAGCCTAAGCACTGGCACAACAGT  
TTAAAGCCTGATTCAAGACATTGTTCCACTCATCTCCAACGGCATAATGGGAAACTGTGTAGGGTCAAAG  
CACGAGTCATCCGTAGGTTGGTCAAGCCTCGTTGACAGAGTTGCCACGGTAACAACCTCTCCCGAAC  
CTTATGCCTCTGCTGGCTTCAGTGCCCTCACTATGATGTTAGGTGGCACCTCTGGTGAGGACCTGCC  
CGGGCGGCCCGCTGA

**64\_16493.edit**

AGCGTGGTCGCGGCCGAGGTGTGCCAGACCAGGAATTGGCTCGACGTTGGCCCTGCTGCTTCCTG  
TAAACTCCCTCCATCCCAACCTGGCTCCCTCCACCCAACCAACTTCCCCCAACCCGGAAACAGACAAG  
CAACCCAAACTGAACCCCCCTAAAAGCCAAAAAAATGGGAGACAATTACATGGACTTGGAAAATATT  
TTCTTGCATTCTCAAACCTAGTTTATCTTGACCAACCGAACATGACCAAAACCAAAAGTGA  
CCTGCCCGGGCGGCCGCTGA

**64\_16500.edit**

TCGAGCGGCCGCCCCGGCAGGTCCCTACCAAGAGGTGCCACCTACAACATCATAGTGGAGGCAGTGAAGA  
CCAGCAGAGGCATAAGGTTGGGAAGAGGTTTACCGTGGCACTCTGTCAACGAAGGCTGAACCAA  
CCTACGGATGACTCGTGTGTTGACCCCTACACAGTTCCATTATGCCGTTGGAGATGAGTGGAACGAAT  
GTCTGAATCAGGCTTAAACTGTTGCCAGTGCTTAGGCTTGGAAAGTGGTCATTCAGATGTGATTCATC  
TAGATGGTGCCATGACAATGGTGTGAACATACAAGATTGGAGAGAAGTGGACCGTCAGGGAGAAAATGGA  
CCTCGGCCGCGACACGCT

**16501.edit**

TCGAGCGGCCGCCCCGGGCAGGTACCGGGGTGGTCAGCGAGGAGCCATTACACTGAACCTCACCATCAA  
CAACCTGCGGTATGAGGAGAACATGCAGCACCCCTGGCTCAGGAAGTTAACACACCACGGAGAGGGTCCTT  
CAGGGCCTGCTCAGGTCCCTGTTCAAGAGCACCAGTGTTGGCCCTGTACTCTGGCTGCAGACTGACTTT  
GCTCAGACCTGAGAACATGGGGCAGCCACTGGAGTGGACGCCATCTGCACCCCTCCGCCTTGATCCCAC  
GGTNCTGGACTGGACANANAGCGGCTATACTGGAGCTGANCCNAACTTGGCGGNGACNCCNCTT

**16501.2.edit**

GAGGACTGGCTAGCTCCCAGTATAGCCGCTCTGTCCAGTCCAGGACCAGTGGGATCAAGGCGGAGG  
GTGCAGATGGCGTCCACTCCAGTGGCTGCCCATGTTCTCAAGTCTGAGCAAAGNCAGTCTGCAGCCAG  
AGTACAGAGGGCCAACACTGGTGCTCTGAACAGGGACCTGAGCAGGCCCTGAAGGACCCTCTCCGTGGT  
GTTGAACTTCTGGAGCCAGGGTGCTGCATGTTCTCATACCGCAGGTTGTTGATGGTGAAGTTCACTG  
TGAATGGCTCCTCGCTGACCACCC

**16502.1.edit**

AGCGTGGTCGCGGCCGAGGTCCACCACACCCATTCCCTGCTGGTATCATGGCAGCCGCCACGTGCCAGG  
ATTACCGGCTACATCATCAAGTATGAGAAGCCTGGGTCTCCTCCAGAGAAAGTGGTCCCTCGGCCCCGCC  
CTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCAGGGAACCGAATATACAATTATGTCATTGCCCTG  
AAGAATAATCAGAAGAGCGAGCCCTGATTGGAAGGAAAAGACAGACGAGCTCCCCACTGGTAACCCCT  
TCCACACCCCAATCTTCATGGACCANANANCTGGATNGTCCTTCACNGGTTAAAAAACCTTTCGCCC  
CCCCACCTGGGATTAACCTGGAAANGGGATTNACCNTTCC

**16502.2.edit**

TCGAGCGGCCGCCCCGGGCAGGTCCCTGTCAGAGTGGCACTGGTAGAAGTCCAGGAACCCCTGAACGTAAAG  
GGTTCTTCATCAGTGCCAACAGGGATGACATGAAATGATGTACTCAGAAGTGTCCCTGGAATGGGGCCCATGA  
GATGGTTGTCTGAGAGAGAGCTTCTGTCCCTACATTGGCGGGTATGGTCTGGCCTATGCCTTATGGGGG  
TGGCCGTTGTGGCGGTGTGGTCCGCCTAAAACCATGTTCTCAAAGATCATTGTCATGGGCCAACACTGGGT  
TGCTGACCAGAAGTGCCAGGAAGCTGAATACCATTTCCAGTGTACATACCCAGGGNGGGTGACCAAGGGG  
GTCNTTNGACCTGGNGAAAGGAACCATCCAAAANCTGNCCCATG

*Fig. 15QQ*

**16503.1.edit**

AGCGTGGNCGCCGAGGTCTGAGGATGTAAACTCTTCCCAGGGGAAGGCTGAAGTGCTGACCATGGT  
GCTACTGGGTCTTCTGAGTCAGATATGTGACTGATGNGAACTGAAGTAGGTACTGTAGATGGTAAGTCT  
GGGTGTCCCTAAATGCTGCATCTCCAGAGCCTCCATCATTACCGTTCTTCTTGTATGGATGAGACA  
CTGTTGAGTATTCTCTAAAGTCACCCTGAAATCTCCTCCAAAGGAAAACCTGTGGAAAAGCCCCTATT  
CTGCCCCATAATTGGTTCTCTAATCNCTCTGAAATCACTATTCCCTGGAANGTTGGAAAAANNGGC  
NACCTGNANCANTGGAAANTGGATANAAGATCCCACCACTTTACCCACNAGCAGAAAGTGGGAANGTACC  
GAAAAGCTCCAAGTAANAAAAAGGAGGGAAAGTAAAGGTCAAGTGGCACCAAGTTCAAACAAAACTTCCC  
CAAACATANAACCCA

**16503.2.edit**

AAGCGGCCGCCCGGGCAGNNCAGNAGTGCCTCGGGACTGGGNTCACCCCCAGGTCTGGCAGTTGT  
CACAGCGCCAGCCCCGCTGGCCTCCAAAGCATGTGCAGGAGCAAATGGCACCGAGATATTCTCTGCCA  
CTGTTCTCCTACGTGGTATGTCTTCCATCATCGTAACACGTTGCCTCATGAGGGTCACACTGAATTCTCC  
TTTCCGTTCCAAGACATGTGCAGCTATTGGCTGGCTCTAGTTGGGGAAAGTTGTTGAAACTGTG  
CCACTGACCTTACTTCCTCCTCTACTGGAGCTTCCGTACCTCTGCTGNTGGAAAAAGGG  
NGGAACNTCTTATCAATTCAATTGACAGTANCCNCTTCTNCCCAAAACATNCAAGGGAAAATATTGATT  
NCNAGAGCGGATTAAGGAACAAACCCNAATTATGGGGGCCAGAAATAAGGGGGCTTCCACAGGTNTTT  
CCT

**16504.1.edit**

TCGAGCGGCCGCCCGGGCAGGTCTGCAGGCTATTGTAAGTGTCTGAGCACATATGAGATAACCTGGGCC  
AAGCTATGATGTTGATACGTTAGGTGTATTAAATGCACTTTGACTGCCATCTCAGTGGATGACAGCCTTC  
TCACTGACAGCAGAGATCTCCTCACTGTGCCAGTGGCAGGAGAAAGAGCATGCTGCGACTGGACCTCG  
GCCGCGACCACGCT

**16504.2.edit**

AGCGTGGTCGCGGCCGAGGTCCAGTCGCAGCATGCTCTTCTGCCACTGGCACAGTGAGGAAGATC  
TCTGCTGTCAGTGGAGAAGGCTGTCATCCACTGAGATGGCAGTCAGTGCATTAAACACCTAACGTATC  
GAACATCATAGCTTGGCCCAGGTTATCTCATATGTGCTCAGAACACTACAATAGCCTGCAGACCTGCCG  
GGCGGCCGCTCGA

*Fig. 15RR*

**16505.1.edit**

CGAGCGGCCGCCGGGCAGGTCCAGACTCCAATCCAGAGAACCAAGCCAGATGTCAGAAGCTACAC  
CATCACAGGTTACAACCAGGCAGTACTACAAGATCTACCTGTACACCTGAATGACAATGCTCGGAGCTC  
CCCTGTGGTCATCGACGCCTCCACTGCCATTGATGCACCATCCAACCTGCGTTCTGCCACCACACCCA  
ATTCCCTGCTGGTATCATGGCAGCCGCCACGTGCCAGGATTACCGGCTACATCATCAAGTATGAGAAGCCT  
GGGTCTCCTCCCAGAGAAGTGGTCCCTGGCCCCGCCCTGGTGNACAGAAGCTACTATTACTGGCCTGG  
AACCGGGAACCGAATATAACATTATGTCATTGCCCTGAAGAATAATCANAAGAGCGAGCCCTGATTGGAA  
GG

**16505.2.edit**

AGCGTGGTCGCGGCCGAGGTCTGTAGAGTGGCACTGGTAGAAGTTCCAGGAACCCCTGAAC TGTAAGGG  
TTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTA CAGAAGTGTCTGGAATGGGGCCCATGAGA  
TGGTTGTCTGAGAGAGAGCTTCTGTCTGTCTTCTCCAATCAGGGCTCGCTCTGATTATTCTT  
CAGGGCAATGACATAAATTGTATATTGGTTCCCGGTTCCAGGCCAGTAATAGTAGCCTCTGTGACACCAG  
GGCGGGGCCGAGGGACCACCTCTGGGAGGAGACCCAGGCTCTCATACTGATGATGTANCCGTAAT  
CCTGGCACCGTGGCGGCTGCCATGATACCAGCAAGGAATTGGGTGTGGTGGCCAAGAACGCAGGTTGG  
ATGGTGCATCAATGGCAGTGGAGGCCTGATNACCACAGGGAGCTCCGANCAATTGTCATTCAAGGTGGA  
CAGGTAGAATCTTGTAAATCAGGTGCCTGGTTGTAAACCTG

**16506.1.edit**

TCGAGCGGCCGCCGGCAGGTTCTGTACCGTGACCTCGAGGTGGACACCACCCCTCAAGAGCCTGAGC  
CAGCAGATCGAGAACATCCGGAGCCCAGAGGGCAGCCGCAAGAACCCCGCCCGCACCTGCCGTGACCTC  
AAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCCCAACCAAGGCTGCAACCTGGATG  
CCATCAAAGTCTCTGCAACATGGAGACTGGTGAGACCTGCGTGTACCCCACTCAGCCCAGTGTGGCCA  
GAAGAACTGGTACATCAGCAAGAACCCCAAGGACAAGAAGCATGTCGGTCCGGCAAAGCATGACCGAT  
GGATTCCAGTTGAGTATGGCGGCCAGGGCTCCGACCCCTGCCATGTCGGACCTCGGCCGACCAACGCT  
AAGCCCGAATTCCAGCACACTGGCGGCCGTTACTAGTGGGATCCGAGCTTGGTACCAAGCTTGGCGTAA  
TCATGGNCATAGCTTCTGNGTAAAAATGGTATTCCGCTTCACAATTCCCAC

**16506.2.edit**

AGCGTGGTCGCGGCCGAGGTCCACATCGGCAGGGTGGAGCCCTGGCCGACACTCGAAC TGGAATCC  
ATCGGTCTGCTCTGCCAACAGACATGCCCTTGTCTGGGTTCTGCTGATGTA CAGTTCTTCTG  
GCCACACTGGGCTGAGTGGGTACACGCCAGGTCTCACCAGTCTCCATGTTGCAGAACACTTGTGGCA  
TCCAGGTTGCAGCCTTGGTGGGTCAATCCAGTACTCTCCACTCTCCAGTCAGAGTGGCACATCTTGAG  
GTCACGGCAGGTGCGGGCGGGGTTCTGCGGCTGCCCTGGCTCCGGATGTTCTGATCTGCTGGCT  
CAAGCTCTGAAGGGTGGTCCACCTCGAGGTACGGTCACGGTACGAAACCTGCCCGGGCGCTCGA

*Fig. 15SS*

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Inventor(s): Jennifer L. Mitcham et al.

Express Mail No. EV719392064US

## **"REPLACEMENT SHEETS"**

16507.1.edit

AGCGTGGTCGCGGCCGAGGTCAAGAACCCGCCGCACCTGCCGTACCTCAAGATGTGCCACTCTGACT  
GGAAGAGTGGAGAGTACTGGATTGACCCCACCAAGGCTGCAACCTGGATGCCATCAAAGTCTTGCAAC  
ATGGAGACTGGTGAGACCTGCGTGTACCCCCACTCAGCCCAGTGTGGCCAGAAGAACTGGTACATCAGCA  
AGAACCCCAAGGACAAGAGGCATGTCTGGTCGGCGAGAGCATGACCGATGGATTCCAGTTGAGTATGG  
CGGCCAGGGCTCCGACCTGCCGATGTGGACCTGCCCGNGCCGNCCGCTCGAAAAGCCCNAATTCCA  
GNCACACTTGGCCGGCCGTTACTACTG

16507.2.edit

TCGAGCGGCCGCCCAGGTCCACATGGCAGGGTGGAGCCCTGGCCGCCATACTCGAACTGGAAT  
CCATCGGTATGCTCTGCCAACAGACATGCCTTTGTCCTGGGTTCTTGCTGATGTACCAGTTCTT  
CTGGGCCACACTGGGCTGAGTGGGTACACGCAGGTCTCACCAAGTCTCATGTTGCAGAAGACTTTGATG  
GCATCCAGGTTGCAGCCTGGTGGGTCAATCCAGTACTCTCCACTCTTCAGTCAGAGTGGCACATCTT  
GAGGTACGGCAGGTGCGGGCGGGGTTCTTGACCTCGGCCGCGACCACGCT

16508.1.edit

16508.2.edit

AGCGTGGTCGGCCGAGGTCTGGCATTCTCGACTCTCTCCAGCCGAGCTTCCCAGAACATCACAT  
CACTGCAAAATAGCATTGCATACATGGATCAGGCCAGTGGAAATGTAAGAAGGCCCTGAAGCTGATGGG  
GTCAAATGAAGGTGAATTCAAGGCTGAAGGAAATAGCAAATTCACCTACACAGTTCTGGAGGGATGGTGCA  
CGAAACACACTGGGAATGGAGCAAACAGTCTTGAATATCGAACACGCAAGGCTGTGAGACTACCTATT  
GTAGATATTGCACCCTATGACATTGGTGGTCTGATCAAGAATTGGTGTGGACGTTGCCCTGTTGCTTT  
TTATAAACCAAACCTATCTGAAATCCCCACAAAAAAAATTAACTCCATATGTGNTCCTTTGTTCAATCTT  
GGCAACCACTGCAAGTGACCGACAAATTCCAGTTATTCAAAATGTTGGAAACAGTATAATTGAC  
AAAGAAAAAAGGATACTTCTTTGGCTGGTCCACCAATACAATTCAAAAGGCTTTGGTTTATT  
TTTANCCAATTCCAATTCAAAATGTCTCAATGGNGCTTATAAAAAAAACTTCAACCCTNTNTGAT

*Fig. 15TT*

**16509.1.edit**

AGCGTGGTCGCGGCCGAGGTCTGGATGCTCCTGCTGTACAGTGAGATATTACAGGATCACTACGGAG  
AAACAGGAGGAATAGCCCTGTCCAGGAGTTCACTGTGCCTGGGAGCAAGTCTACAGCTACCATCAGCGG  
CCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTCACTGGCCGTGGAGACAGCCCCGCAAGCA  
GCAAGCCAATTCCATTAATTACCGAACAGAAATTGACAAACCATCCCAGATGCAAGTGACCGATGTTCA  
ACAACAGCATTAGTGTCAAGTGGCTGCCTCAAGTCCCCCTGTTACTGGTACAGAAGTAACCACCACTCCC  
AAAAATGGACCAGGACCAACAAAAACTAAAAGTGCAGGTCCAGATCAAACAGAAAATGGACTATTGAAGGC  
TTGCAGCCCACAGTGGAGTATGGNTAGGNGTATGCTCAGAATCCAGCCGGAGAAAGTCAGCCTT  
CTGGTTAGACTGCAGTAACCAACATTGATGCCCTAAAGGACTGGNCATTCACTGGATGGTGGATGTCC  
AATT

**16509.2.edit**

TCGAGCGGCCGCCGGCAGGTCTGCAGCTCTGCAGNGTCTTCTTACCATCAGGTGCAGGGAAATAGC  
TCATGGATTCCATCCTCAGGGCTCGAGTAGGTACCCCTGTACCTGGAAACTTGCCCCCTGTGGGCTTCCCA  
AGCAATTGATGGAATCGACATCCACATCAGNGAATGCCAGTCCTTAGGGCGATCAATGTTGGTTACTGC  
AGTCTGAACCAGAGGCTGACTCTCTCCGCTTGGATTCTGAGCATAAGACACTAACACATACTCCACTGTGG  
GCTGCAAGCCTCAATAGTCATTCTGTTGATCTGGACCTGCAGTTAAGTTTGGTGGCCTGNCCA  
TTTTGGGAAGTGGGGGTTACTCTGTAACAGTAACAGGGGAACCTGAAGGCAGCCACTTGACACTAATG  
CTGTTGTCCTGAACATCGGTCACTGCATCTGGGATGGTTGACAATTCTGGTCGGCAAATTATGGA  
AATTGGCTTGCTGCTGGCGGGCTGNCTCCACGGCCAGTGACAGCATA

**16510.1.edit**

TCGAGCGGCCGCCGGCAGGTCTGCAGCTCTGCAGTGCTTCTTACCATCAGGTGCAGGGAAATAGC  
TCATGGATTCCATCCTCAGGGCTCGAGTAGGTACCCCTGTACCTGGAAACTTGCCCCCTGTGGGCTTCCCA  
AGCAATTGATGGAATCGACATCCACATCAGTGAATGCCAGTCCTTAGGGCGATCAATGTTGGTTACTGC  
AGTCTGAACCAGAGGCTGACTCTCTCCGCTTGGATTCTGAGCATAAGACACTAACACATACTCCACTGTGG  
GCTGCAAGCCTCAATAGTCATTCTGTTGATCTGGACCTGCAGTTAAGTTTGGTGGNCCTGNCCA  
TTTTGGGAAGGGGTGGTACTCTGTAACAGTAACAGGGGAACCTGAAGGCAGCCACTTGACACTAATG  
CTGGTGGCCTGAACATCGGTCACTGCATCTGGGATGGTTGGTCAATTCTGTTGGTAATTATGGAAA  
TTGGCTTACTGGCTTGCGGGGGCTGTCTCCACGGNCAGTGACAAGCATACACAGGNGATGGGTATAATCA  
ACTCCAGGTTAAGGCCNCTGATGGTA

**16510.2.edit**

AGCGTGGTCGCGGCCGAGGTCTGGATGCTCCTGCTGTACAGTGAGATATTACAGGATCACTACGGAG  
AAACAGGAGGAATAGCCCTGTCCAGGAGTTCACTGTGCCTGGGAGCAAGTCTACAGCTACCATCAGCGG  
CCTTAAACCTGGAGTTGATTATACCATCACTGTGTATGCTCACTGGCCGTGGAGACAGCCCCGCAAGCA  
GTAAGCCAATTCCATTAATTACCGAACAGAAATTGACAAACCATCCCAGATGCAAGTGACCGATGTTCA  
ACAACAGCATTAGTGTCAAGTGGCTGCCTCAAGTCCCCCTGTTACTGGTACAGAGTAACCACCACTCCC  
AAAATGGACCAGGACCAACAAAAACTAAAAGTGCANGTCCAGATCAAACAGAAATGACTATTGAAGGC  
TTGCAGCCCACAGTGGAGTATGTGGTTAGTGTCTATGCTCAGAATNCCAAGCGGAGAGAGTCAGCCTTG  
GTTCAGACT

*Fig. 15UU*

**16511.1.edit**

TCGAGCGGCCGCCCCGGGCAGGTCAAGCGCTCTCAGGACGTACCACCATGGCCTGGCTTGCTCCTCCT  
CACCCCTCCTCACTCAGGGCACAGGGCCTGGGCCAGTCTGCCCTGACTCAGCCTCCCTCCCGTCCGG  
GTCTCCTGGACAGTCAGTCACCATCTCCTGCACTGGAACCAGCAGTGACGTTGGTCTTATGAATTGTCT  
CCTGGTACCAACAACACCCAGGCAAGGCCCCAAACTCATGATTCTGAGGGTCACTAAGCGGCCCTCAGG  
GGTCCCTGATCGCTTCTCTGGCTCCAAGTCTGGCAACACGGCCTCCCTGACCGTCTGGCTCCANGCT  
GAGGATGANGCTGATTATTACTGGAAGCTCATATGCAGGCAACAACAATTGGGTGTTGGCGGAAGGGAC  
CAAGCTGACCGTNCTAAGGTCAAGCCCAGGCTGCCCCCTCGGTCACTGTGTTCCCACCCCTCTGAA  
GAAGCTTCAAGCCAACAANGNCACACTGGGTGTCTATAAGTGGACTTCTACCC

**16511.2.edit**

AGCGTGGTCGCGGCCGAGGTCTGTAGCTTCTGTGGACTTCCACTGCTCAGGCGTCAGGCTCAGGTAGCT  
GCTGGCCCGTACTTGTGTTGCTTGNTTGGAGGGTGTGGTGGTCTCCACTCCCGCCTGACGGGGCTG  
CTATCTGCCCTCCAGGCCACTGTCACGGCTCCCGGGTAGAACAGTCACTTATGAGACACACCAGTGTGGCCTT  
GTTGGCTTGAAGCTCCTCAGAGGAGGGTGGAACAGAGTGACCGAGGGGGCAGCCTGGCTGACCTAG  
GACGGTCAGCTGGTCCCTCCGCCAACACCCAATTGTTGTTGCCTGCATATGAGCTGCAGTAATAATCAG  
CCTCATCCTCAGCCTGGAGCCCAGAGACNGTCAAGGGAGGCCGTGTTGCCAAGACTTGGAAAGCCAGAN  
AAGCGATCAGGGACCCCTGAGGGCCGTTACNGACCTAAAAATCATGAATTGGGGGCCTTGCCT  
GGNGNTGGTTGGTNACCAGNAAAACAAAATTTCATAAAGCACCAACGTCACTGCTGGTTCCAGTGCANG  
AANATGGTGAAGTGAANTGTCC

**16512.1.edit**

AGCGTGGTCGCGGCCGAGGTCCAGCATCAGGAGCCCCGCCCTGCCGGCTCTGGTCATGCCCTTCTTTT  
GTGGCCTGAAACGATGTCAATTGCACTCGCAGTAGCAGAACTGCCGTCCACTGCTGTCTTATAAGTCTGCA  
GCTTCACAGCCAATGGCTCCCATATGCCAGTTCCCTATGTCCACCAAAGTACCCGTCTCACCATTACAC  
CCCAGGTCTCACAGTTCTGGTGTGCTGGCCGAAGGGAGGTAAGTANACGGATGGTGTGGTCCC  
ACAGTTCTGGATCAGGGTACGAGGAATGACCTCTAGGGCCTGGCNACAAGCCCTGTATGGACCTGCCG  
GGCGGGCCCGCTCGA

**16512.2.edit**

TCGAGCGGCCGCCCCGGGCAGGTCCATACAGGGCTTGGCCAGGCCCTAGAGGNCAATTCTGTACCC  
GATCCAGAACTGTGGGACCAAGCACCATCCGCTACTTACCTCCCTCGGGCCAAGCACACCCAGGAGAAC  
TGTGAGACCTGGGTGAAATGGNGAGACGGGTACTTGGTGGACATGAAGGAACCTGGCATATGGGAGC  
CATTGGCTGNGAAGCTGCANACTTATAAGACAGCAGTGGAGACGGCAGTTCTGCTACTGCGAATTGATGAC  
ATCGTTCAAGGCCACAAAAGAAAGGCGATGACCANAGCCGGCAAGGCAGGGCTTCTGATGCTGGACCT  
CGGCCGCCGACCACGCTT

*Fig. 15VV*

**16514.1.edit**

AGCGTGGTCGCGGCCGAGGTCCACTAGAGGTCTGTGTGCCATTGCCAGGCAGAGTCTCGCTAACAA  
CTCCTAGGAGGGCTTGCTGTGCGGAGGGCTGCTATGGTGTGCTGCGGTCATCATGGAGAGTGGGCC  
AAAGGCTGCGAGGTTGTGGTCTGGAAACTCCGAGGACAGAGGGCTAAATCCATGAAGTTGTGGATG  
GCCTGATGATCCACAGCGGAGACCCTGTTAECTACTACGTTGACACTGCTGTGCGCCACGTGTTGCTCANA  
CAGGGTGTGCTGGCATCAAGGTGAAGATCATGCTGCCCTGGGACCCANCTGGCAAAAATGCCCTAAA  
AACCCCTGCCNTGACCACGTGAACCATTGTNGAACCCAAGATGAANATACTGCCACCACCCCCCA  
TTC

**16514.2.edit**

TCGAGCGGCCGCCGGCAGGTCTGCCAAGGAGACCTGTTATGCTGTGGGACTGGCTGGGCATGGC  
AGGCGGCTCTGGCTCCCACCCCTGTTCTGAGATGGGGTGGTGGCAGTATCTCATCTTGGTTCCA  
CAATGCTCACGTGGTCAGGCAGGGCTTCTAGGGCCAATCTTACCACTGGGTCCCAGGGCAGCATGAT  
CTTCACCTTGATGCCACAGCACACCTGTCTGAGCAACACGTGGCGCACAGCAGTGTCAACGTAGTAGTTAA  
CAGGGTCTCCGCTGTGGATCATCAGGCCATCCACAAACTTCATGGATTAGCCCTGTGCTCGGAGTTTC  
CCAAAACACCACAACCTGCCAGCCTTGGCCCCACTTCTCATGAATGAAACCGCAGCACACCATTANC  
AAGGCCCTCCGCACAGGNAAGCCCTCTAAGGAGTTGTAAACGCAAAAACCTTGCCCTGGGCAAA  
GGGCACACAGACCTNTANTNGGACCTTGGNCCCGAACCAACCGCTT

**16515.1.edit**

AGCGTGGTCGCGGCCGAGGTCTGGCCCTCTGGCAAGGCTGGTAAGATGGCACCCCTGGAAAACCCGG  
ACGACCTGGTGAGAGAGGAGTTGGACCACAGGGTCTGGTTCCCTGGAACCTCTGGACTTCCT  
GGCTCAAAGGCATTAGGGGACACAATGGTCTGGATGGATTGAAGGGACAGCCCCTGCTCTGGTGTGA  
AGGGTGAACCTGGNGCCCTGGTAAAATGGAACTCCAGGTCAAACAGGGAGCCGNGGCTCCTGGNG  
AGAGAGGACGTGTTGGTCCCCCTGGCCANACCTGCCCGGCGCTCNAAAAGCCGAAATCCAGNA  
CACTGGCGGCCGNTACTANTGGAATCGAACCTCGTACCAAGCTTGGCGTAATCATGCCATAGCTG  
TTCCCTGGGNGGAAATTGGTATTCCGCTNCCAATTCCACACAACATACCGAACCCGGAAAGCATTAAAGT  
GTAAAAGCCCTGGGGGGCTAAATGANGTGAGCNTAACTNCATTAAATTGGCGTTGCGCTTCACTGCC  
CGCTTTCCAGTCCGGGNA

**16515.2.edit**

TCGAGCGGCCGCCGGCAGGTCTGGGCCAGGGCACCAACACGTCTCTCACCAAGGAAGCCCACGG  
GCTCCTGTTGACCTGGAGTTCCATTTCACCAGGGCACCAGGTTCACCCCTCACACCAGGAGCACCGG  
GCTGCCCTCAATCCATCCAGACCATTGTGNCCCTAATGCCCTGAAGCCAGGAAGTCCAGGAGTTCCA  
GGGAAACCACGAGCACCCGTGGTCAAACAACCTCTCACCAAGTCGTCGGGTTCCAGGGTAC  
CATCTTACCAAGCCTGCCAGGAGGGCAGACCTCGGCCGACCGCT

*Fig. 15WW*

**16516.1.edit**

ANCGTGGTCGCGGCCGAGGTCTCACCAAGAGGTGNCACCTACAACATCATAGTGGAGGCAGTGAAAGACC  
ANCAGAGGCATAAGGTTGGGAAGAGG

**16516.2.edit**

TCGAGCGGCCGCCGGCAGGTCCATTCTCCCTGACGGTCCCACCTCTCCAATCTTAGTTAGTCACAC  
CATTGTCATGGCACCATCTAGATGAATCACATCTGAAATGACCACTCCAAAGCCTAAGCACTGGCACACA  
GTTTAAGCCTGATTAGCAGACATTGTTCCACTCATCTCCAACGGCATAATGGGAAACTGTGTAGGGTCAA  
AGCACGAGTCATCCGTAGGTTGTTCAAGCCTCGTGACAGAGTTGTCACGGTAACAACCTCTTCCGA  
ACCTTATGCCTCTGCTGGTCTTCAGTGCCCTCACTATGATGTTAGGTGGCACCTCTGGTAGGACCTC  
NGNCCNGAACACGCTTAAGCCGNATTCTGCAGAATAATCCCCATCACACTGGCGGCCGCTCGANCATG  
CATCNTAAAAGGGGCCCAATTCCCCCTATAAGNGAANCCGTATTNCCAATTCACTGGNCCGCCGN  
TTTACAAACGNCGGTGAACGGGGAAAAACCTGGCGGTACCCAACTTAATGCCNTGGCAGCACAA  
TCCCCCTTTCGNCCANCNTGGCGTAAATAACCGAAAA

**16517.1.edit**

ANCGNGGTGCGGCCGANGTNTTTTCTTNTTTTT

**16518.1.edit**

AGCGTGGTCGCGGCCGAGGTCTGAGGTTACATGCGTGGTGGACGTGAGCCACGAAGACCCCTGAGGT  
CAAGTTCAACTGGTACGTGGACGGCGTGGAGGTGCATAATGCCAAGACAAAGCCGCGGGAGGAGCAGTAC  
AACAGCACGTACCGGGNGGTAGCGTCCTCACCGTCTGCACCAGAATTGGTTGAATGGCAAGGAGTACA  
AGNGCAAGGTTCCAACAAAGCCNTCCCAGCCCCNTGAAAAAAACCTTCAAAGCCAAGGGCAGCC  
CCGAGAACACAGGTGTACACCCCTGCCCATCCCAGGAAAAGANCAANAACCNGGTTCAGCCTAA  
CTTGCTGGTCNAANGCTTTATCCACGNACTCCCCNTGGAANTGGAAAAACCAATGGGCCAANC  
CGAAAAACAAATTACAANAACCCC

**16518.2.edit**

TCGAGCGGCCGCCGGCAGGTGTCGGAGTCCAGCACGGGAGGCGTGGCTTGAGTTGTTCTCCGGCT  
GCCCATTGCTCTCCACTCCACGGCGATGTCGCTGGATAGAACCTTGACCAGGCAGGTCAAGCTGAC  
CTGGTTCTGGTCATCTCCTCCGGATGGGGCAGGGTGAACACCTGGGTTCTGGGGCTTGCCCTT  
GGTTTGAANATGGTTCTCGATGGGGCTGGAAGGGCTTGTGNAACCTTGCACCTGACTCCTGCC  
ATTACCCAGNCCTGGNGCAGGACGGNGAGGACNCTNACCACACGGAACCGGCTGGACTGCTCC

**16519.1.edit**

AGCGTGGTCGCGGACGANGCCTGTCAGAGTGGNACTGGTAGAAGTTCCANGAACCCCTGAACGTAAAGGG  
TTCTTCATCAGTGCCAACAGGATGACATGAAATGATGTAUTCAGAAGNGNCCTGGAATGGGCCATGANA  
TGGTTGCC

**16519.2.edit**

TCGAGCGGCCGCCGGCAGGTCCACCACACCCAATTCTGCTGGTATCATGGCAGCCGCCACGTGCCA  
GGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGCTCCTCCCAGAGAAGTGGTCCCTGGCCCCG  
CCCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCGGGAACCGAATATAACAATTATGTCATTGCC  
TGAAGAATAATCAGAAGAGCGAGCCCCTGATTGGAAGGAAAAGACAGACGAGCTCCCCAAGTGGTAACC  
CTTCCACACCCCAATCTTCATGGACCAGAGATCTGGATGTTCCACAGTTCAAAAGACCCCTTCGGC  
ACCCCCCCTGGTATGAACCTGGAAAANGNANTTAANCTTCCTGGCA

**16520.1.edit**

AGCGTGGTCGCGGCCGAGGTCTGGATGCTCCTGCTGTACAGTGAGATATTACAGGATCACTACGGAG  
AAACAGGAGGAAATAGCCCTGTCCAGGAGTTCACTGTGCCTGGAGCAAGTCTACAGCTACCATCAGCGG  
CCTTAACCTGGAGTTGATTATACCATCACTGTGTATGCTGCACTGGCGTGGAGACAGCCCCGCAAGCA  
GCAAGCCAATTCCATTAATTACCGAACAGAAATTGACAAACCATCCCAGATGCAAGTGACCGATGTTCAAGG  
ACAACAGCATTAGTGTCAAGTGGCTGCCTCAAGGTNCCTGGTACTGGTTACAGANTAACCACCACTCC  
AAAAATGGACCAGGAACCACAAAAACTTAAACTGCAGGGTCCAGATCAAACAGAAATGACTATTGAANG  
CTTGCAGCCCACAGTGGAGTATGNGGTTAGTNCTATGCTCAGAATCCAAGCGAAAANGTCAAGCC  
TTNTGGGTTCAA

**16520.2.edit**

TCGAGCGGCCGCCGGCAGGTCTGGTGGGCTGGCACACGCACATGGGGNGTTGNTCTNATCCAG  
TCATGGATTCCATCCTCAGGGCTGAGTAGGTACCCCTGTACCTGGAAACTTGCCTGGCTTCC  
AGCAATTGATGGAATGACATCCACATCAGTGAATGCCAGTCCTTAGGGCGATCAATGTTGGTTACTGC  
AGNCTGAACCAGAGGCTGACTCTCTCCGCTGGATTCTGAGCATAGACACTAACACATACTCCACTGTGG  
GCTGCAANCCTCAATAANNATTCTGTTGATCTGGACC

**16521.2.edit**

TCGAGCGGCCGCCGGCAGGTCTGGTGGGCTGGCACACGCACATGGGGNGTTGNTCTNATCCAG  
CTGCCCAGCCCCATTGGCGAGTTGAGAAGGTGTGCAGCAATGACAACAAACCTCGACTCTCCTGCC  
ACTTCTTGCCACAAAGTGCACCCCTGGAGGGCACCAAGAAGGGCCACAAGCTCCACCTGGACTACATCGG  
GCCTTGCAAATACATCCCCCTTGCCTGGACTCTGAGCTGACCGAATTCCCCCTTGCATGCCACTGG  
GCTCAAGAACCGTCTGGCACCCCTGTATGANAGGGATGAAGACACNA

*Fig. 15YY*

**16522.1.edit**

AGCGTGGTCGCGGCCGAGGTCTGCCTACAGTCCTCAGGACTCTACTCCCTCAGCAGCGTGGTGACCGTG  
CCCTCCAGCAACTCGGCACCCAGACCTACACCTGCAACGTAGATACAAGCCCAGCAACACCAAGGTGG  
ACAAGAGAGTTGAGCCAAATCTTGTGACAAAACACACATGCCACCAGCACCTGAACCTCCTG  
GGGGGACCGTCAGTCTCCTCTTCCCCCGCATCCCCCTCCAAACCTGCCCGGGCGGCCGCTCGAAAGCC  
GAATTCCAGCACACTGGCGGCCGGTACTAGTGGANCCNAACTTGNANCCAACCTGGNGGAANTAAATGGG  
CATANCTGTTCTGGGGGGAAATTGGTATCCNGTTACAATTCCNCACACATACGAGCCGGAAGCATA  
AAAGNGTAAAAGCCTGGGGNGCCTANTGAAGTGAAGCTAAACTCACATTAATTNGCCTGCCGCTCACT  
GGCCGCTTTCCAGC

**16522.2.edit**

TCGAGCGGCCGCCGGCAGGTTGGAAGGGGGATGCGGGGGAGAGGAAGAGACTGACGGTCCCCCAG  
GAGTTCAGGTGCTGGGCACGGTGGCATGTGTGAGTTTGTCACAAGATTGGCTCAACTCTTGTCCA  
CCTTGGTGTGCTGGCCTGTGATCTACGTTGCAGGTGTAGGTCTGGNGCCGAAGTTGCTGGAGGGCAC  
GGTCACCACGCTGCTGAGGGAGTAGAGTCCTGAGGAAGTGTANGACAGACCTCGGCCNGACCACGCTAA  
GCCGAATTCTGCAGATATCCATCACACTGGCGGCCGCTCGAGCATGCATTTAGAGG

**16523.1.edit**

AGCGTGGNCGCGGACGANGACAACAACCCC

**16523.2.edit**

TCGAGCGGCCGCCGGCAGGNCACATCGGCAGGGTCGGAGCCCTGGCCGCCACTCGAAGTGAAT  
CCATCGGTATGCTCTTGGCGAACAGACATGCCTCTGCTGGGTTCTGCTGATGNACCAGTTCT  
CTGGGCCACACTGGGCTGAGTGGGTACACGCAGGTCTACCAGTCTCCATGTTGCAGAAGACTTGATG  
GCATCCAGGTTGCAGCCTGGTGGGTCAATCCAGTACTCTCCACTCTTCAGTCAGAGTGGCACATCT  
GAGGTACGGCAGGTGCAGGGGGTTCTGACCT

**16524.1.edit**

AGCGTGGTCGCGGCCGAGGTCCAGCCTGGAGATAANGGTGAAGGTGGTCCCCCGGACTTCAGGTATA  
GCTGGACCTCGTGGTAGCCCTGGTGAGAGAGGTGAAACTGGCCCTCCAGGACCTGCTGGTTCCCTGGTG  
CTCCTGGACAGAACGGTGAACCTGGNGGTAAAGGGAGAAAGAGGGGCTCCGGNTGANAAAGGTGAAGGAG  
GCCCTCCTGNATTGGCAGGGGCCCANACTTAGAGGTGGAGCTGGCCCCCTGGCCCCGAAGGAGGAA  
AGGGTGCTGCTGGTCCTGGGCCACCTGG

*Fig. 15ZZ*

Serial No. 09/827,271 Docket No. 210121.462C6

Inventor(s): Jennifer L. Mitcham et al.

Express Mail No. EV719392064US

## **"REPLACEMENT SHEETS"**

16524.2.edit

TCGAGCGGCCGCCCCGGCAGGTCTGGGCCAGGAGGAATAGGACCACTAGGACCCATTGGGCCATCT  
TTCCCTGGGACACCATTAGCACCTGGACCGCCTGGTTCACCCTTGTCAACCCTTGGACCAGGACTTCCAAG  
ACCTCCTCTTCTCCAGGCATTCTTGAGACCAAGGAGTACCAACAGCACCAGGTGGCCCAGGAGGACCA  
GCAGCACCCCTTCCTCCTGGGACCAAGGGGACCAAGCTCCACCTTAAGTCCTGGGGCCCTGCCAATC  
CAGGAGGGCCTCCTCACCTTCTCACCCGGAGCCCTCTTCT

16526.1.edit

TCGAGCGGCCGCCCCGGCAGGTCCACCGGGATATTGGGGCTGGCAGGAATGGGAGGCATCCAGAAC  
GAGAAGGAGACCATGCAAAGCTGAACGACCGCCTGGCCTCTTACCTGGACAGAGTGAGGAGCCTGGAGA  
CCGACAACCGGAGGCTGGAGAGCAAAATCCGGGAGCACTGGAGAAGAAGGGACCCCAGGTAGAGACT  
GGAGGCCATTACTCAAGATCATCGAGGACCTGAGGGCTCANATCTCGCAAATACTGCNGACAATGCCCG

16526.2.edit

ATGCNGGTCGCGGCCGANGACCANCTGGCTCATCTGACTCTAAAGNCNTACCAAGNANTACGG  
CATTGCCAATCTGCAGAACGATGCGGGCATTGTCCGCANTATTGCGAAGATCTGAGCCCTCAGGNCCCTCG  
ATGATCTTGAAGTAANGGCTCCAGTCTTGACCTGGGTCCCTTCTCCAAGTGCTCCGGATTTGCTC  
TCCAGCCTCCGGTTCTGGTCTCCAAGNCTCTCACTCTGTCCAGGAAAAGAGGCCAGGCGGNCGATCAG  
GGCTTTGCATGGACT

16527.1.edit

16527.2.edit

TCGAGCGGCCGCCCCGGCAGGTCTGCCAACACCAAGATTGGCCCCGCCGCATCCACACAGTTNGTGTG  
CGGGGAGGTAACAAGAAATACCGTGCCCTGAGGNTGGACGNGGGATTCTCCTGGGCTCAGAGTGT  
GTACTCGTAAAACAAGGATCATCGATGTTGTCTACAATGCATCTAATAACGAGCTGGTTCGTACCAAGACCC  
TGGTGAAGAATTGCATCGTGCTCATNGACAGCACACCGTACCGACAGTGGTACCGAAGTCCCACATGCN  
CCT

Fig. 15AAA

**16528.1.edit**

TCGAGCGGCCGCCGGCAGGTCCACCAACCCATTCTGCTGGTATCATGGCAGCCGCCACGTGCCA  
GGATTACCGGCTACATCATCAAGTATGAGAAGCCTGGTCTCCTCCCAGAGAAGTGGTCCCTCGGCCCG  
CCCTGGTGTACAGAGGCTACTATTACTGGCCTGGAACCAGGAACCGAATATAACAATTATGTCATTGCC  
TGAAG

**16528.2.edit**

AGCGTGNTNCGGCCGAGGATGGGGAAAGCTCGNCTGTCTTTCTTCCAATCAGGGCTNNNTCTTCTG  
ATTATTCTCAGGGCAANGACATAAAATTGTATATTGGNTCCGGTCCAGNCCAGTAATAGTAGCCTCTGT  
GACACCAGGGCGGGGCCGAGGGACCACTCTGGGAGGGAGACCCAGGCTCTCATACTGATGATGAAG  
CCGGTAATCCTGGCACGTGGCGGCTGCCATGATACCAANGAATTGGGTGTGGTGGACCTGCCGG  
GCAGGGCCGCTCGAAAANCGAATTNTGCAAGAATATCCATCACACTGGCGGGCGNTCGAACCATGC  
ATCNTAAAAGGGCCCCAATTCCCCCTATTAGGNGAACCCNCATTAAACAAATTCCACTTGG

**16529.1.edit**

TCGAGCGGCCGCCGGCAGGTCTGGCGGTCGCACTGGTATGCTGGTCTGTTGGTCCCCCGGCCCT  
CCTGGACCTCCTGGTCCCCCTGGTCTCCAGCGCTGGTTGACTTCAGCTCCTGCCAGCCACCTC  
AAGAGAAGGCTACGATGGTGGCCGCTACTACCGGGCTGATGATGCCAATGTGGTCGTGACCGTGACCT  
CGAGGTGGACACCACCCCTCAAGAGCCTGAGCCAGCAGAATCGAAAACATTGGAACCCAAGAAGGGCAA  
GCCCGCAAAGAAACCCCGCCCGCACCTGGCCNGAACCTCCAAGAANGTGCCCACNTCTTGA  
AAAAGGGAAAANTACTTGGATTGGAC

**16529.2.edit**

AGCGTGTCGCGGCCGAGGTCCACATCGGCAGGGTGGAGGCCCTGGCCGCCATACTCGAACTGGAATCC  
ATCGGTATGCTCTCGCCGAACCAAGACATGCCTCTTGTCTGGTTCTTGCTGATGTACCGAGTTCTTCTG  
GCCACACTGGGCTGAGTGGGTACACGCAGGTCTACCAGTCTCCATGTTGCAGAAGACTTGTGGCA  
TCCAGGTGAGCCTGGTGGGTCAATCCAGTACTCTCCACTCTCCAGTCAGAAGTGGCACATCTGA  
GGTCACGGCAGGGTGCAGGGTCTGGCTCCGGTCTGGCTCCGGTCCGGTGGCTCCGGAAATGTTCTNNGAACT  
TGCTGG

*Fig. 15BBB*

**16530.1.edit**

AGCGTGGTCGCGGCCGAGGTCCACTAGAGGTCTGTGCCATTGCCAGGCAGAGTCTCGCGTTACAAA  
CTCCTAGGAGGGCTTGCTGTGCGGAGGGCCTGCTATGGTGTGCTGCGGTCATCATGGAGAGTGGGGCC  
AAAGGCTGCGAGGTTGTGGTGTGGAAACTCCGAGGACAGAGGGCTAAATCCATGAAGTTGTGGATG  
GCCTGATGATCCACAGCGGAGACCCTGTTAECTACTACGTTGACACTTGCTGTGCGCACGTGTTGCTCA  
NACANGGTGGCTGGCATCAAGGNG

**16530.2.edit**

TCGAGCGGCCGCCGGCAGGTCTGCCAAGGAGACCTGTTATGCTGTGGGGACTGGCTGGGCATGGC  
AGGCGGCTCTGGCTCCCACCCTCTGTTCTGAGATGGGGTGGTGGCAGTATCTCATCTTGGGTTCCA  
CAATGCTCACGTGGTCAGGCAGGGCTCTAGGGCCAATCTTACCACTAGTTGGTCCCAGGGCAGCATGAT  
CTTCACCTTGATGCCACACCCCTGTCTGAGAACACGTGGCGCACAGCAAGTGTCAACGTAAGTAAGT  
TAACAGGGTCTCCGCTGTGGATCATCAGGCCATCCACAAACTCATGGATTAAACCTCTGTCCTCGGAG

**16531.1.edit**

TCGAGCGGCCGCCGGCAGGTGTTCAGAGGTCCAAGGTCCACTGTGGAGGTCCCAGGAGTGCTGGT  
GGTGGGCACAGAGGTCCGATGGGTGAAACCATGACATAGAGACTGTTCTGTCCAGGGTAGGGGCC  
AGCTCTTGATGCCATTGGCCAGTTGGCTCAGCTCCAGTACAGCCGCTCTGTTGAGTCAGGGCTTT  
GGGGTCAAGATGATGGATGCAGATGGCATCCACTCCAGTGGCTGCCATCCTCTCGGACCTGAGAGAG  
GTCAGTCTGCAGCCAGAGTACAGAGGGCCAACACTGGTGTCTTGATA

**16531.2.edit**

AGCGTGGTCGCGGCCGAGGTCTGTACTGGAGCTAAGCAAACGTACCAATGACATTGAAGAGCTGGGCC  
CTACACCCCTGGACAGGAACAGTCTCTATGTCAATGGTTACCCATCAGAGCTCTGTGNCCACCACAGCA  
CTCCTGGGACCTCCACAGTGGATTCAAGAACCTCAGGGACTCCATCCTCCCTCTCCAGCCCCACAATTATG  
GCTGCTGGCCCTCTCCTGGTACCATTCACCCCTCAACTCACCACCAACCTGCAGTATGGGAGGACAT  
GGGTACCCCTGNCTCCAGGAAGTCAACACCACA

**16532.1.edit**

TCGAGCGGCCGCCGGACAGGTCTGGCGGATAGCACCGGGATTTGGAATGGATGAGGTCTGGCA  
CCCTGAGCAGTCCAGCGAGGACTTGGTCTAGTGAGCAATTGGCTAGGAGGATAGTATGCAGCACGGN  
TCTGAGNCTGTGGGATAGCTGCCATGAAGTAACCTGAAGGAGGTGCTGGCTGGTANGGGTTGATTACAGG  
GTTGGGAACAGCTCGTACACTGCCATTCTGCATATACTGGTAGTGAGGTGAGCCTGGCCCTTTCTT  
TG

*Fig. 15CCC*

**01\_16558.3.edit**

AGCGTGGTCGCGGCCGAGGTGAGCCACAGGTGACCAGGGCTGAAGCTGGGCTGCTGGNCCTGCTGGT  
CCTG

**02\_16558.4.edit**

CAGCNGCTCCNACGGGCCTGNGGGACCAACAAACACCCTTACCCCTAGGCCCTTGGCTCCTCTTCT  
CCTTAGCACCAGGTTGACCAGCAGCNCCANCAGGACCAGCAAATCCATTGGGCAGCAGGACCGACCT  
CACACGTTACCAGGGCTCCCCGAGGACCAGCAGGACCAGCAGGACCAGCAGCCCCAGCTCGCCCC  
GGTCACCTGTGGCTCACCTCGGCCGCGACCACGCT

**03\_16535.1.edit**

TCGAGCGGTGCCCCGGCAGGTCCACCGGGATAGCCGGGGTCTGGCAGGAATGGAGGCATCCAGAA  
CGAGAAGGAGACCATGCAAAGCCTGAACGACCGCCTGGCCTTACCTGGACAGAGTGAGGAGCCTGGA  
GACCGANAACC GGAGGCTGGANAGCAAATCCGGGAGCAGTGGAGAAGAAGGGACCCCAGGTCAAGAG  
ACTGGAGCCATTACTCAAGATCATCGAGGGACCTGGAGG

**04\_16535.2.edit**

AGCGNGGTGCGCGGCCGAGGTCCAGCTCTGTCTCATACTGACTCTAAAGTCATCAGCAGCAAGACGGCA  
TTGTCAATCTGCAGAACGATGCGGGCATTGTCGCCAGTATTGCGAAGATCTGAGCCCTCAGGTCTCGAT  
GATCTTGAAGTAATGGCTCCAGTCTCTGACCTGGGCTCCCTTCTCCAAGTGCTCCGGATTTGCTCTC  
CAGCCTCCGGTTCTCGGTCTCCAGGTCTCACTCTGTCCAGGTAAAGAAGGCCAGGCCGGTCTCAGGC  
TTTGCATGGTCTCCTCTGTTCTGGATGCCTCCATTCTGCCAGACCC

**05\_16536.1.edit**

TCGAGCGGCCGCCGGCAGGTCAAGGAAGCACATTGGTCTTAGAGCCACTGCCTCCTGGATTCCACCTGT  
GCTGCGGACATCTCCAGGGAGTGCAGAAGGGAAAGCAGGTCAAAGTCTCAGATCAGTCAGACTGGCTGTT  
CTCAGTTCTCACCTGAGCAAGGTCAAGTCTGCAGCCAGAGTACAGAGGGCCAACACTGGTGTCTGAACAA  
GGGCTTGAGCAGACCCCTGCAGAACCCCTCTCCGTGGTTGAACCTCCTGGAAACCAGGGTGTGCATGTT  
TTCCCTCATATGCAAGGTGGTGATGG

*Fig. 15DDD*

**07\_16537.1.edit**

AGCGTGGTCGCGGCCGAGGTCCACATCGGCAGGGTCGGAGCCCTGGCCGCCACTCGAACTGGAATCC  
ATCGGTATGCTCTGCCGAACCAGACATGCCTCTTGTCTGGGTTCTGCTGATGTACCAAGTCTTCTG  
GCCACACTGGCTGAGTGGGTACACCGCAGGTCTCACCAAGTCTCCATGTTGCAGAAGACTTGATGGC  
ATCCAGGTTGCAGCCTTGGTTGGGTCAATCCAGTACTCTCCACTCTTCCAGTCAGAAGTGGCACATCTT  
GAGGTACCGGCAGGTGCCGGCGGGGTTCTGGCTGCCCTGGCTCCGGATGTTCTGATC  
TGCTTGGCTCAGGCTCTGAGGGTGGGTCCACCTCGAGGTACGGTCACCGAAACCTGCCCGGGCGG  
CCCGCTCGA

**08\_16537.2.edit**

TCGAGCGGTCGCCCGGGCAGGTTCGTGACCGTGACCTCGAGGTGGACACCACCCCTCAAGAGCCTGAGC  
CAGCAGATCGAGAACATCCGGAGCCCAGAGGGCAGCCGCAAGAACCCCGCCGCACCTGCCGTGACCTC  
AAGATGTGCCACTCTGACTGGAAGAGTGGAGAGTACTGGATTGACCCAACCAAGGCTGCAACCTGGATG  
CCATCAAAGTCTTCTGCAACATGGAGACTGGTGAGACCTGCGTGTACCCCACTCAGCCCAGTGTGGGCC  
AGAAGAAACTGGTACATCAGCAAGGAACCCAAGGACAAGAGGCATTGTCTGGTCCGGCGAGNAGCATG  
ACCCGATGGATTCAGTTGAGTATTGGCGGCCAGGGCTCCGACCCCTGCCGATGTGGACCTCGGCC  
GCGACCACCGCT

*Fig. 15EEE*

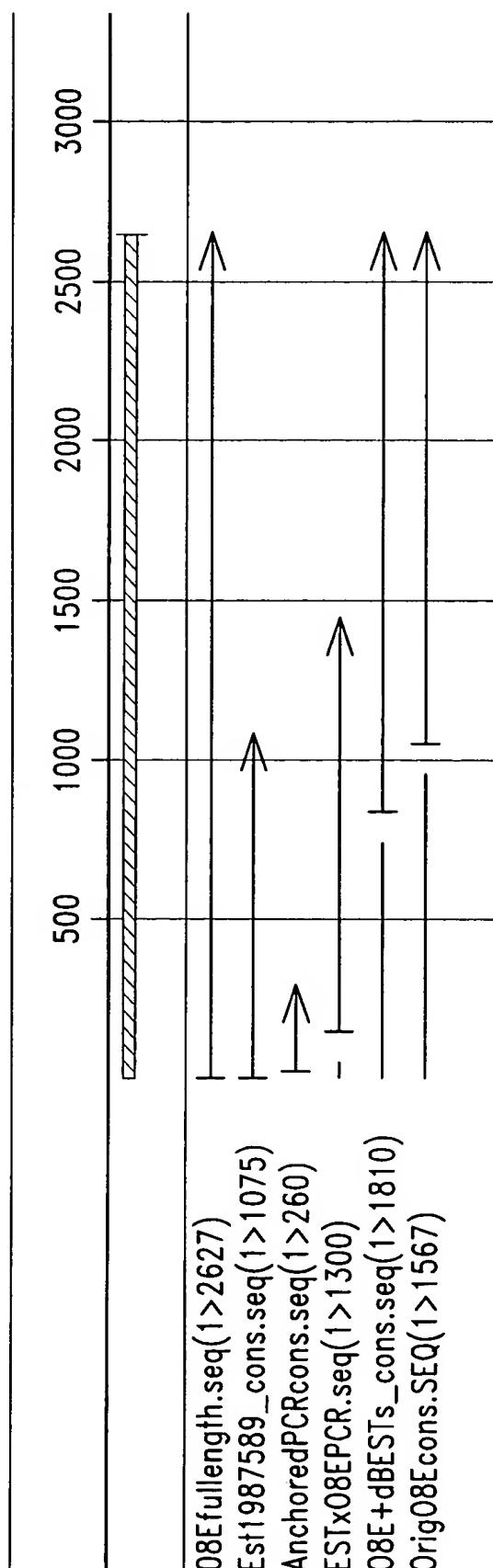


Fig. 16

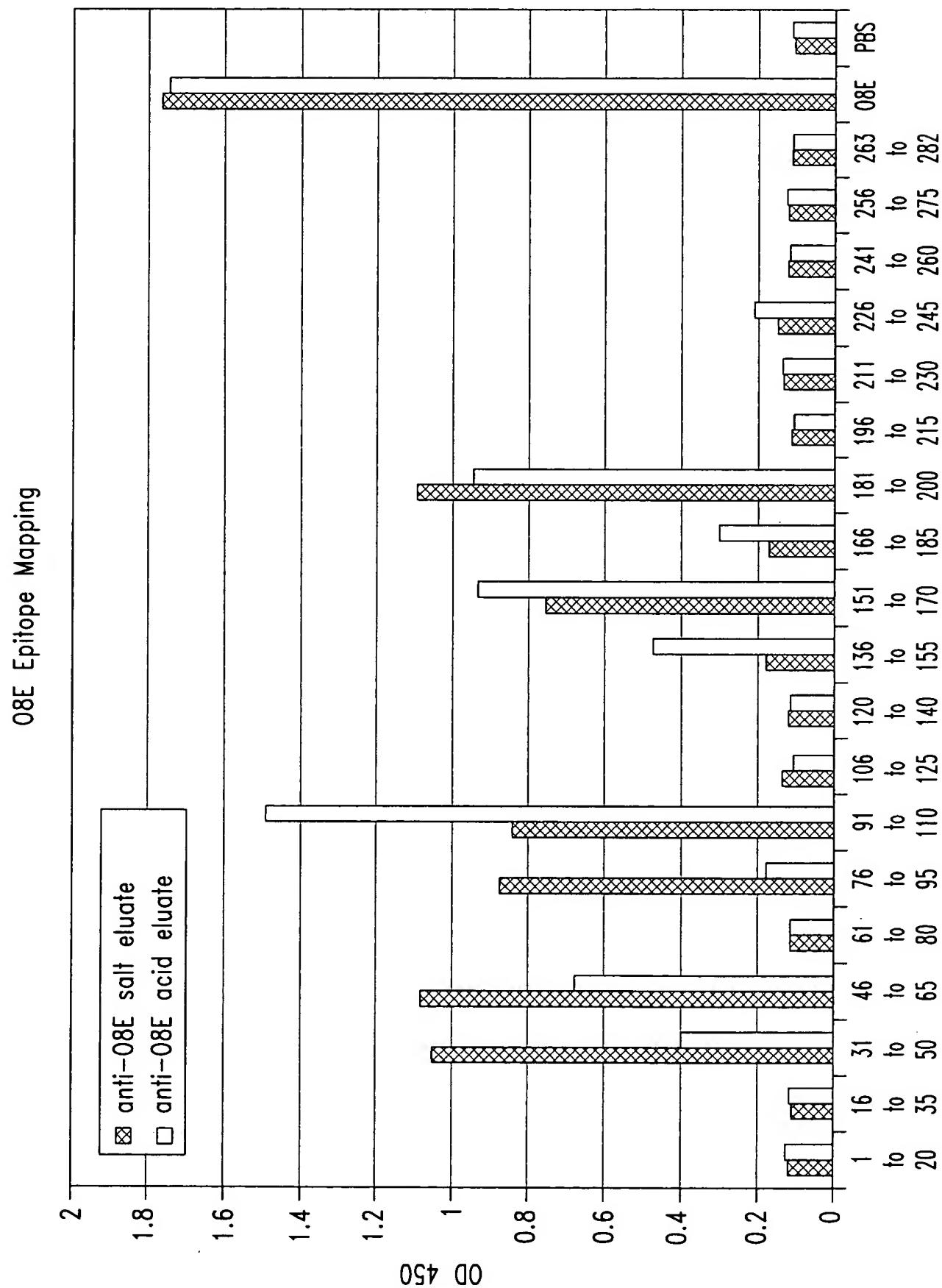
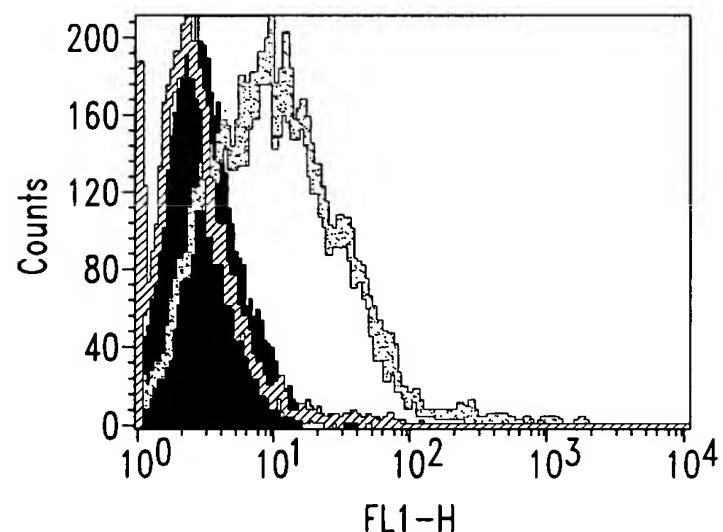


Fig. 17

08E Surface Expression



- B305D/HEK stained with anti-08E antibody
- 08E/HEK stained with anti-08E antibody
- ===== 08E/HEK stained with an irrelevant antibody

*Fig. 18*

Serial No. 09/827,271 Docket No. 210121.462C6

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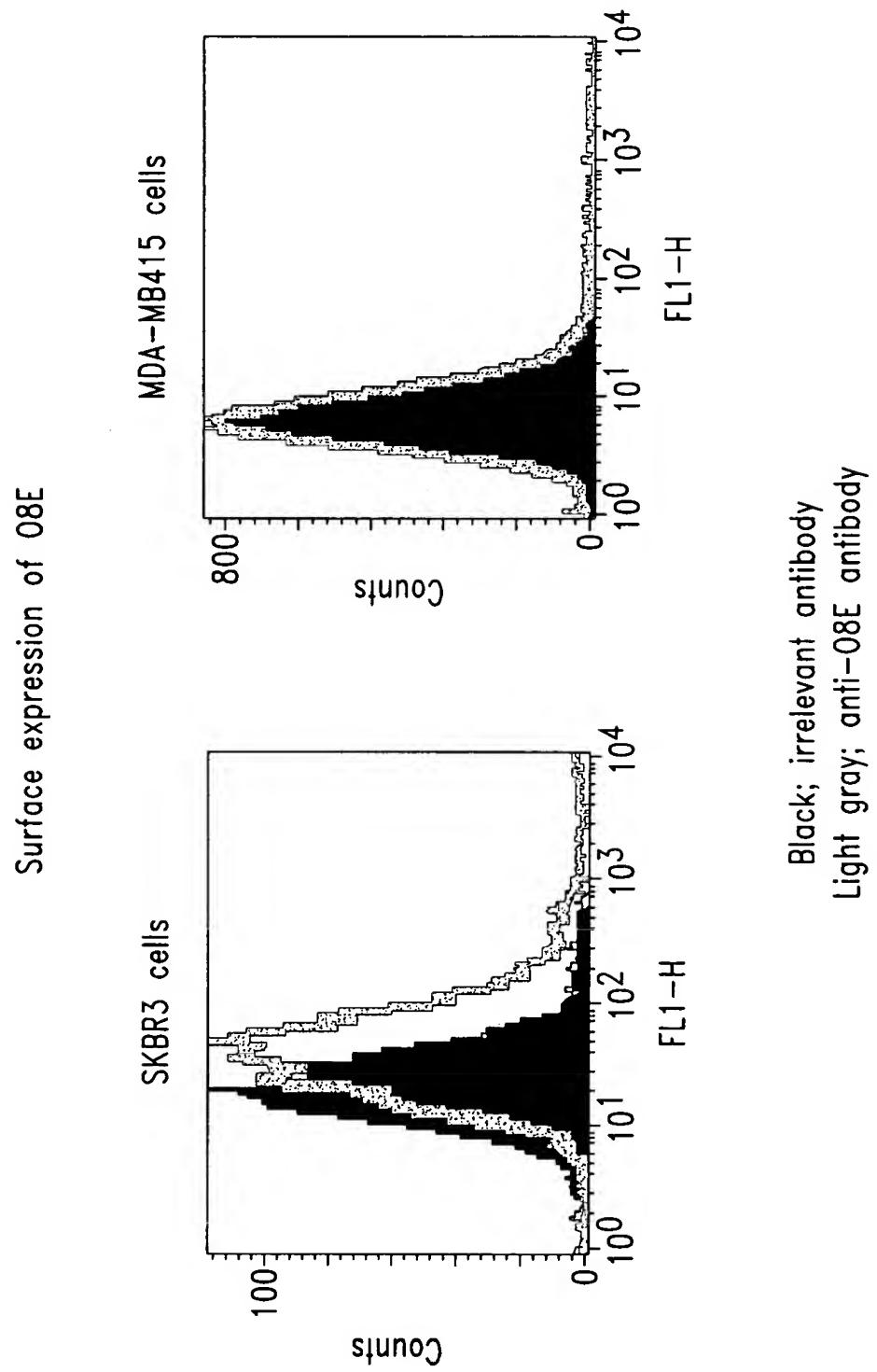
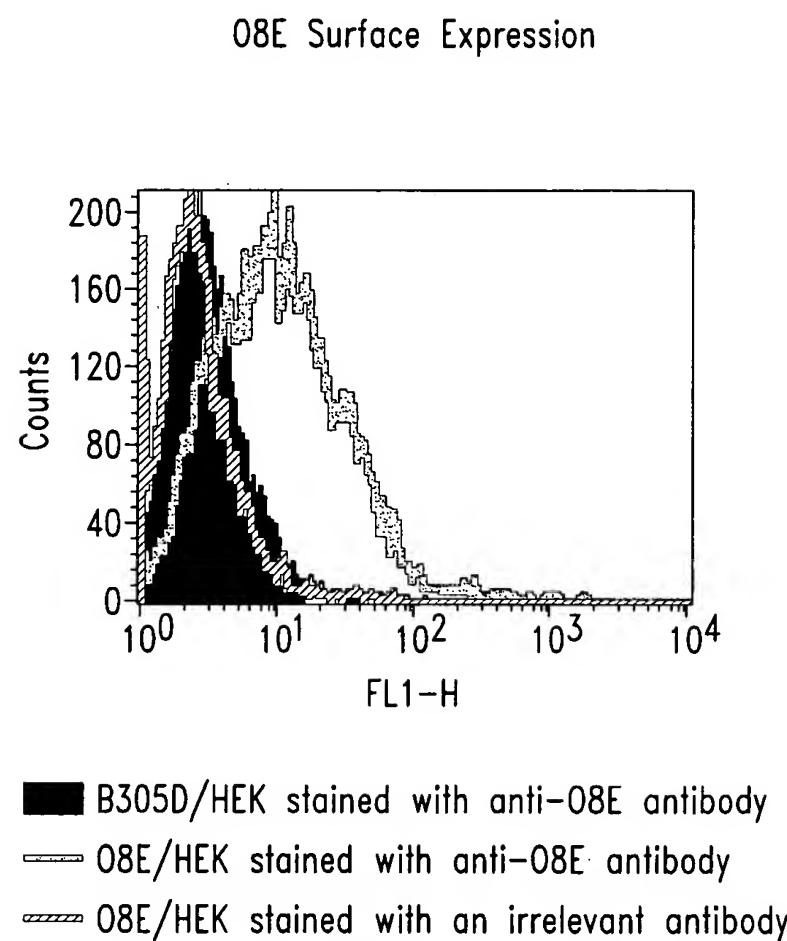


Fig. 19



*Fig. 20*

Serial No. 09/827,271 Docket No. 210121.462C6

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Express Mail No. EV719392064US "REPLACEMENT SHEET"

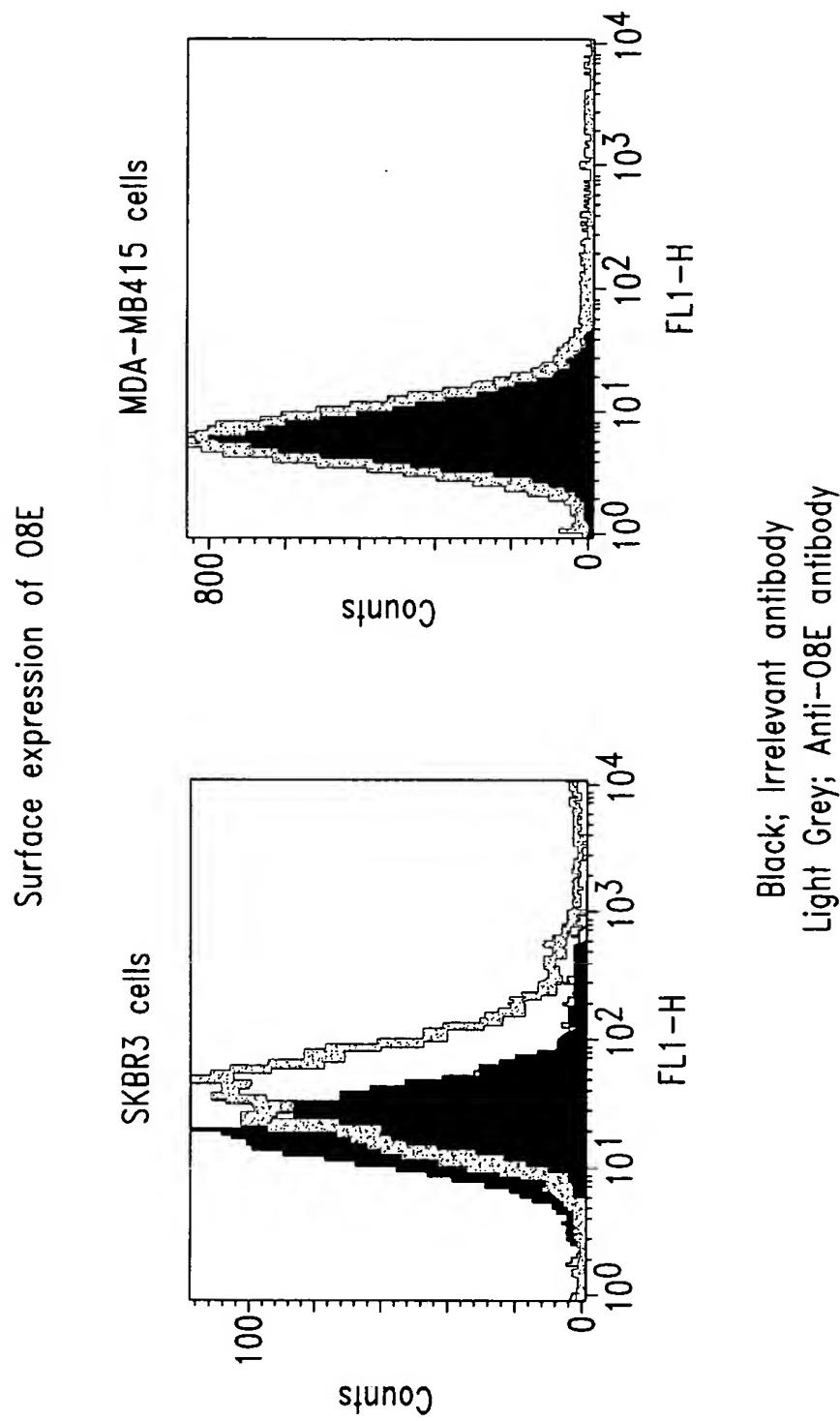
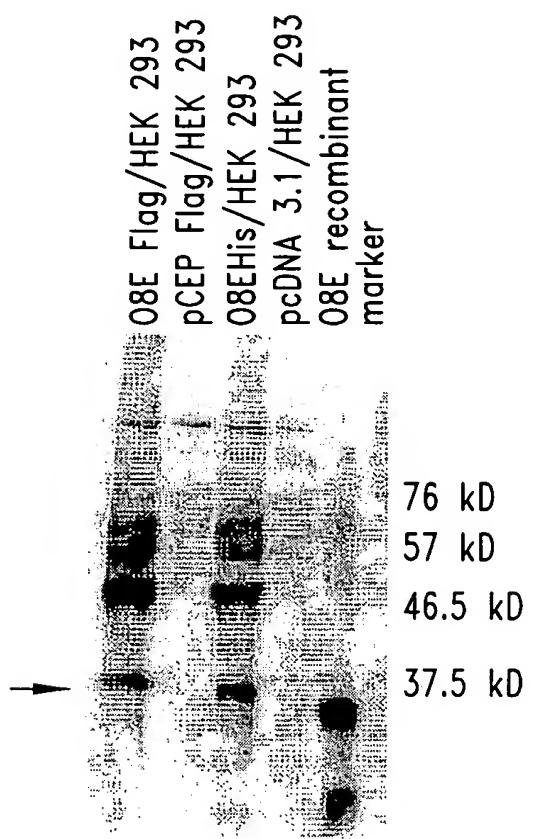


Fig. 21

Serial No. 09/827,271 Docket No. 210121.462C6  
Inventor(s): Jennifer L. Mitcham et al.  
Express Mail No. EV719392064US "REPLACEMENT SHEET"

08E expression in HEK293 Cells  
(probed with anti-08E rabbit polyclonal sera #2333L)



*Fig. 22*

Serial No. 09/827,271 Docket No. 210121.462C6

Inventor(s): Jennifer L. Mitcham et al.

Express Mail No. EV719392064US "REPLACEMENT SHEET"

08E Rabbits 01212000

Date: 1/21/99

Antigen on Plate	Sera Sample	Antibody Dilutions											
		1:1000	1:2000	1:4000	1:8000	1:16000	1:32000	1:64000	1:128000	1:256000	1:512000	1:1024000	1:2048000
08E (#632-24)	Preimmune sera (#2576L):11/10/99	0.13	0.09	0.08	0.07	0.07	0.07	0.06	0.07	0.07	0.07	0.07	0.07
	Average	0.10	0.08	0.07	0.07	0.07	0.07	0.06	0.06	0.07	0.06	0.06	0.07
	$\alpha$ -08E (#2576K):1/11/2000	0.11	0.08	0.07	0.07	0.07	0.07	0.06	0.07	0.07	0.06	0.06	0.07
	Average	2.92	2.81	2.74	2.70	2.58	2.08	1.61	1.01	0.68	0.40	0.24	0.15
	Preimmune sera (#2333L):11/10/99	2.93	2.77	2.74	2.69	2.48	2.08	1.57	1.00	0.66	0.40	0.23	0.16
	Average	0.09	0.07	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
	Preimmune sera (#2333L):1/11/2000	0.08	0.07	0.06	0.07	0.10	0.07	0.07	0.07	0.07	0.07	0.07	0.07
	Average	0.08	0.07	0.06	0.06	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07
	$\alpha$ -08E (#2333L):1/11/2000	2.73	2.75	2.64	2.48	2.30	1.78	1.41	0.92	0.58	0.32	0.20	0.14
	Average	2.73	2.76	2.51	2.60	2.37	1.93	1.44	0.88	0.58	0.35	0.20	0.14

Fig. 23

Serial No. 09/827,271 Docket No. 210121.462C6

Inventor(s): Jennifer L. Mitcham et al.

Express Mail No. EV719392064US "REPLACEMENT SHEET"

## affi-pure 08E #2576L 739.87A&amp;B

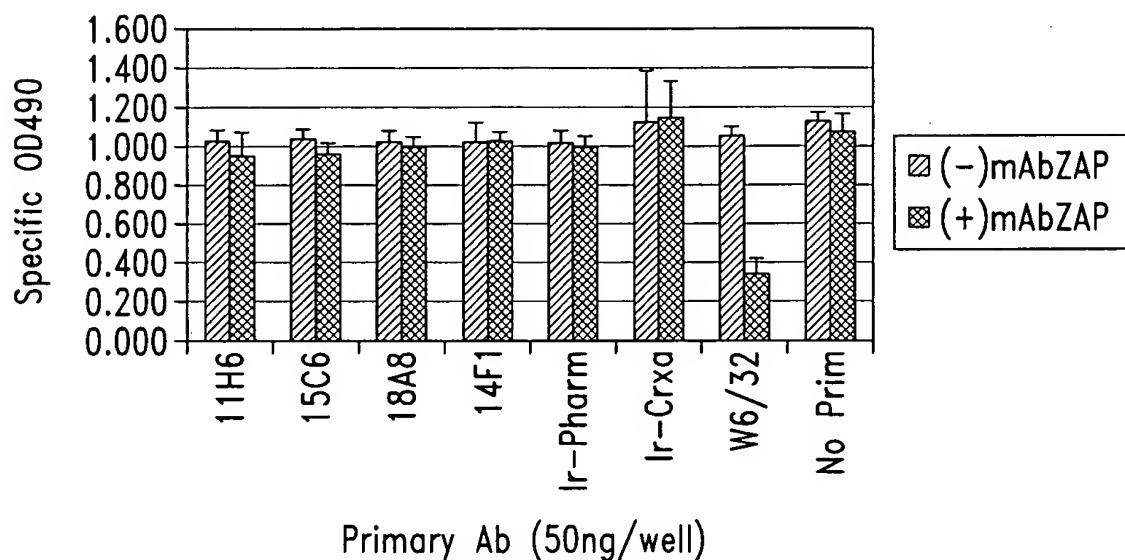
		Date: 5/2/2000	
Antibody Name Rabbit #, Bleed Date Purification Method Buffer Notebook	Lot # Antibody Concentration Initial Amount	739.87A 1.4mg/ml 18mg	739.87B 1.7mg/ml 3mg

Antigen on Plate	Sera Sample	Antibody Dilutions										
		1:1000	1:2000	1:4000	1:8000	1:16000	1:32000	1:64000	1:128000	1:256000	1:512000	1:1024000
08E #632-24	preimmune sera (2576L)	0.15	0.11	0.09	0.08	0.08	0.07	0.07	0.07	0.08	0.07	0.08
		0.14	0.10	0.09	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07
	Average	0.14	0.10	0.09	0.08	0.07	0.07	0.07	0.07	0.08	0.07	0.08
$\alpha$ -08E (2576K):2/8/2000	2.74	2.71	2.63	2.49	2.29	1.87	1.39	0.92	0.57	0.33	0.20	0.14
	2.72	2.68	2.64	2.47	2.26	1.93	1.42	0.94	0.57	0.34	0.21	0.14
	Average	2.73	2.70	2.63	2.48	2.27	1.90	1.41	0.93	0.57	0.34	0.21
affinity pure $\alpha$ -08E poly salt peak 739-87A	2.69	2.60	2.50	2.21	1.83	1.34	0.99	0.64	0.38	0.22	0.15	0.11
	2.59	2.48	2.38	2.21	1.82	1.33	1.00	0.62	0.37	0.22	0.14	0.11
	Average	2.64	2.54	2.44	2.21	1.83	1.34	1.00	0.63	0.37	0.22	0.15
affinity pure $\alpha$ -08E poly acid peak 739-67B	2.46	2.39	2.40	2.34	2.08	1.73	1.29	0.81	0.49	0.29	0.19	0.13
	2.65	2.66	2.61	2.45	2.14	1.76	1.30	0.82	0.48	0.29	0.19	0.13
	Average	2.56	2.53	2.51	2.39	2.11	1.74	1.30	0.81	0.49	0.29	0.19

Fig. 24

Anti-08E mAb Binding to 08E Amino Acids  
61-80 Induces Ligand Internalization

Hek Internalization of 08E mAbs



Hek/08E Internalization of 08E mAbs

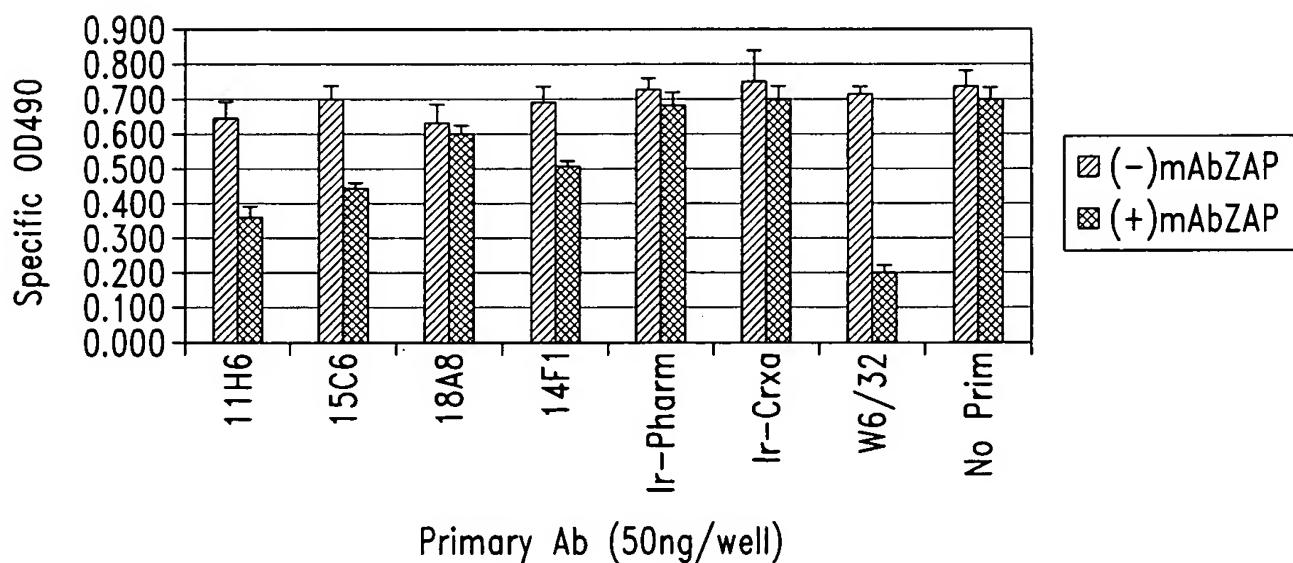


Fig. 25